प्रारम्भ - IV

PRARAMBH - IV

(Second Edition, 2024)

Reading Material of Foundation Course of

Indian Railways Management Service

(Operating, Traffic Planning, Safety, Commercial Management & Business Development, Public Relation & Media Management, Medical and Rajbhasha)

by

Hari Shankar Verma, IRTS,
Director General, IRITM



भारतीय रेल परिवहन प्रबंधन संस्थान

INDIAN RAILWAYS INSTITUTE OF TRANSPORT MANAGEMENT





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Indian Railways Management Service (IRMS) *And*
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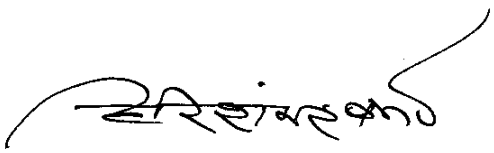
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"Reading Material of Foundation Course of Indian Railways Management Service (IRMS) and Other Courses Conducted at IRITM" (PRARAMBH Volume IV) is the reading material for the trainee officers and faculty, who are undergoing training in the law related courses at IRITM. The style of the book has been kept simple and the language is also lucid and easy to understand. A detailed index is given to find out the topics concerned with page number. The purpose of this publication is to train the officers and supervisors about the brief outline of Operating, Safety, Commercial, Public Relation & Media Management, Medical and Rajbhasha on Indian Railways. Efforts have been made to keep the content as original as possible. However, there may be some variance as the contents of the chapters have been taken from different authentic sources like books, government websites, and links. The views expressed in those chapters and content of report are therefore not the views of Central Government, IRITM and Authors of the reading material. This Volume is to be used for learning and academic purposes only . While, reading the book, the reader must keep in mind as under:

1. This book is printed as reading material for the purpose of training and learning by trainee officers.
2. The reading material is always prepared after reading several codes, manuals, and other relevant information from authentic Railway sources. It's for training purposes and nothing to do with the actual working of Railways in the field.
3. In case, there is any contradiction in writing, readers are advised to follow the codes, manuals and other extant instructions of Ministry of Railway and Zonal Railway.

4. I have tried to remain to the point, but it is the responsibility of the trainer to prepare the digital content, especially PowerPoint presentations, etc. as per the latest guidelines.
5. The various subjects, especially the Acts and Rules referred to in the book, keep changing due to need of the time. Therefore, trainee officers need to update the same.
6. All railway officials are subject to the rules and instructions given time-to-time to them and those must be followed and not to adhere to the contents written in this reading material.
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Hari Shankar Verma, IRTS
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"Reading Material of Foundation Course of Indian Railways Management Service (IRMS) and Other Courses Conducted at IRITM" (PRARAMBH Volume I, II, III & IV)

Azadi Ka Amrit Mahotsav
जया वर्मा सिन्हा
JAYA VARMA SINHA

सत्यमेव जयते

अध्यक्ष एवं मुख्य कार्यकारी अधिकारी,
रेलवे बोर्ड
पदेन प्रमुख सचिव, भारत सरकार
रेल मंत्रालय

CHAIRMAN & CHIEF EXECUTIVE OFFICER,
RAILWAY BOARD
EX-OFFICIO PRINCIPAL SECRETARY
GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

FOREWORD

Volume IV of PRARABMH, the designated reading material for probationary officers, covers crucial subjects such as operations, commercial aspects, business development, safety, and personnel management. These topics hold immense significance for railway officers as they directly impact the safety, revenue, and efficiency of the Indian Railways.

The operational framework is intricate, demanding detailed study, especially during the probationary period. Indian Railways operate a diverse array of services, including various passenger trains, freight trains, material trains, and breakdown trains. Each of these trains operates under specific rules, speeds, and preferences, demanding comprehensive knowledge from officers.

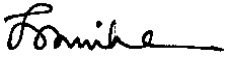
Freight business significantly contributes to the revenue of Indian Railways, while passenger services fulfil a vital need for the country's populace. It becomes the responsibility of every officer to maintain a delicate balance and maximize resource utilization. Marketing the services is equally crucial – the primary objective of any enterprise is financial viability for sustained longevity, and a thorough understanding of commercial rules ensures this viability. Regular business development activities should remain a focal point for every railway officer.

Efficient operations are at the core of railway function, involving passenger service punctuality, timely freight cargo delivery and, above all, ensuring safety. A nuanced understanding of the Systems of Working is essential for all railway officers.

Safety is paramount for Indian Railways – this reflects in objectives, attitude, rules and policy directives and resource allocation. The chapter on traffic safety gives an overview of the organization structure created specifically for this purpose, investigation into unusual occurrences and inspections.

Lessons on personnel management are also provided in this volume – knowledge of which is essential for railway officers to handle human resources effectively. A significant portion of the expenditure within Indian Railways goes towards salaries and pensions, and optimizing this resource should be a foremost duty for officers.

This volume marks the completion of a series of foundational reading material. It's anticipated that these materials will effectively serve upcoming batches of IRMS probationers. Commendation is due to the faculty of IRITM and specifically to Shri Hari Shankar Verma, Director General, IRITM, for their painstaking efforts in writing and editing this foundational course material.



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PREFACE

The Volume IV of PRARAMBH, the reading material for IRMS probationary officers' deals with operation, safety, commercial, business development, and human resource management in Indian Railways. All these, disciplines are very important and well progression of readings of earlier three volumes of PRARAMBH as they set the foundation of learnings on Indian Railways.

Indian Railways is a transport means; therefore, operation of trains is most important. The operation of Indian Railway is complex in nature and all kind of commodities and passengers' travels through the same railroad and there are different priorities of every class of traffic. The railway operation is operated with certain rules, which are most important to understand and remember throughout carrier of any railway officers. These rules are called General & Subsidiary Rules (G&SR), all operation and maintenance of infrastructure must be undertaken through these rules.

The freight traffic is the major revenue source to the railways therefore, it needs to be understood in detail but

although passenger traffic is not that profitable to the railways due to subsidies, but safety, punctuality and efficiency is measuring scale of operation in railway business. The concept of safety and important lessons are dealt along with railway operation. A separate chapter has been assigned for safety management in railways, however, the probationers must have read accident and disaster management in Volume III of PRARAMBH.

Commercial and business development deals with how Indian Railway transact with customers and sell the services of railways, collection of money, accountal and several other subject of marketing. Unless someone is not understanding the business of railways, they cannot be a good railway officer. The earnings, financial management and marketing are the keys to keep any organization moving and sustaining for longer time. It is true to Indian Railways also. The marketing and business development is the dynamic process of any management for getting more and more revenue to the organization.

A detailed description of most of the aspects of Human Resource Management (personnel management) is done in this volume. To become an outstanding railway manager, every probationary officer must learn the rules of Human Resources Management as all activities in any organization that are performed by the staff. Thus, a deep understanding of rules as well as the way to deal with staff is must. The officers must try to be Leaders, and important lessons are learned and experienced at working posts, but foundation is laid at training institute. Therefore , it is needed that whatever lessons are imparted at training institute, those should be taken seriously.

A lesson on dedicated freight corridor has been also included in railway operation section which needs to be

read And as it is going to be important for transportation of freight traffic.

As I did in earlier volumes of PRARAMBH, in this volume also I would like to share with you a poem, which talks about life and how to deal with it. It is one of the most important poems of Joseph Rudyard Kipling and is titled "If". The poem reads as under:

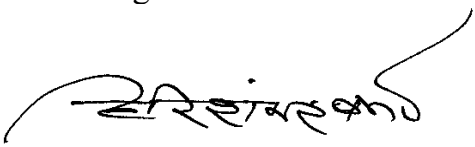
If—

By Joseph Rudyard Kipling

If you can keep your head when all about you
Are losing theirs and blaming it on you;
If you can trust yourself when all men doubt you,
But make allowance for their doubting too;
If you can wait and not be tired by waiting,
Or, being lied about, don't deal in lies,
Or, being hated, don't give way to hating,
And yet don't look too good, nor talk too wise;
If you can dream—and not make dreams your master;
If you can think—and not make thoughts your aim;
If you can meet with triumph and disaster
And treat those two impostors just the same;
If you can bear to hear the truth you've spoken
Twisted by knaves to make a trap for fools,
Or watch the things you gave your life to broken,
And stoop and build 'em up with wornout tools;
If you can make one heap of all your winnings
And risk it on one turn of pitch-and-toss,
And lose, and start again at your beginnings
And never breathe a word about your loss;
If you can force your heart and nerve and sinew
To serve your turn long after they are gone,
And so hold on when there is nothing in you
Except the Will which says to them: "Hold on";

If you can talk with crowds and keep your virtue,
Or walk with kings—nor lose the common touch;
If neither foes nor loving friends can hurt you;
If all men count with you, but none too much;
If you can fill the unforgiving minute
With sixty seconds' worth of distance run—
Yours is the Earth and everything that's in it,
And—which is more—you'll be a Man, my son!

The time spent during probation period to any direct officer is the most important phase of life as it grants you most important lessons of professional and personal life. During probation, you will make lot of friends, mentors from faculty and well-wishers. Therefore, the probationary officers must devote time and do take the part in most of the activities of the institute and always be grateful to the trainers, support staff and helpers.
I wish you all the success in learning and later in life.



Hari Shankar Verma, IRTS
Director General
Author of
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PREFACE TO THE SECOND EDITION

After successful and well-appreciated publication of first edition of all volumes of PRARAMBH, now I am happy to present the second edition of Reading Material of Foundation Course of Indian Railways Management Service (IRMS) and Other Courses Conducted at IRITM" (PRARAMBH Volume IV). Present volume has completely re-aligned and several new topics and left over subjects have been added such as Public Relations and Media Management, Medical and Rajbhasha.

Railway operation along with commercial management is the basis of railway transportation. These disciplines are directly concerned with freight and passenger customers, which is the business of railways. I have added the subject Public Relations and Media Management in this volume to make it a complete guide to the frontline managers of Indian Railways. The probationary officers of any discipline of the railway cannot be good railway officers till they understand the operation and business of the railways.

To become a good operating and commercial officer, one has to keep understanding the demands of customers, economic development in the country and learning the strategy for marketing and business development. It is always essential for traffic officers to keep themselves updated about latest

developments in the market and new businesses to keep railways always profitable.

I am always expecting from young fellow officers, Probationary Officers to read the literature available on Indian Railways especially the Government publications, Codes and Manuals and develop the deep understanding of planning, railway economics and rating structure of Indian Railways. But we must not forget the basics.

To arouse the interest in railway, I would like to present a poem for you about the "old railway line" and memories around it. I could not find the author of the poem, but it is written by someone who had deep interest in railways. The poem reads as under:

The old railway line

A spear through the farmland,
was the old railway line,
by a stone station house,
it lay its used spine,
in the softness of blossoms in May.

Though dead in its coffin tracks,
with long rusting bones,
a tale of lost greatness,
spelled out in its stones,
its sleepers an ordered array.



A cream flaking signal
still watchful remains,
its unmoving arms,
stop invisible trains,
forgotten smoke plumes of grey.

You can hear a train whistle,

as the screeching of steel,
slamming doors second class,
seems a moment too real,
while steam dreams go tumbling away.

Once there went crowds,
I see them undead,
bustling and speeding,
sped to heaven instead,
in this moment I wish I could stay.

It's a graveyard of hope,
this old railway line,
ancestors thought it would last,
the rigours of time will test our design,
though whatever man makes will decay.

In the softness of blossoms in May,
its sleepers an ordered array,
forgotten smoke plumes of grey,
while steam dreams go tumbling away,
in this moment I wish I could stay,
though whatever man makes will decay.

I personally believe that to improve the railway infrastructure and its maintenance, we must re-visit to the basics at working level rather focusing too much on higher level of things.

In preparation of this volume, following officers have helped me in writing and proofreading of certain topics, for which I am indebted deeply.

Shri Vikram Aditya, IRTS, the then Professor (Traffic Planning and Costing), Shri Shishir Somvanshi, IRTS Dean and Sr. Professor (TO and MPP), Shri K.K Rora, IRTS, Professor (Logistics and Supply Chain Management), Ms. Rita Raj, IRTS, Sr. Professor (Commercial & Business Development),

Mrs. Neha Ratnakar, IRTS, the then Professor (Commercial Training & Vigilance), Richa Sharma, IRTS, the then Professor (Logistics and Supply Chain Management), Miss Krishna Tiwari, IRTS, Professor Administration and OSD to DG.

In preparation of this volume, Shri Gaurav Krishna Bansal, Sr. Prof. (Commercial Management), IRITM has helped me with proofreading. I would like to thank Mr. Rohit Yadav for typing, proofreading, and formatting the contents into printable format. I am also grateful to Shri Rajesh Kumar, IRTS, Sr. Professor (Admin.) and Miss Krishna Tiwari, IRTS, Professor Administration and OSD to Undersigned for getting it published along with their sub-ordinate officials Shri Kishore Mehta and Mr. Mohd. Mohsin Quadir for printing and other formalities in shorter time.

Teacher's Day.
Sunday, 05.09.2024,

Hari Shankar Verma, IRTS
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PART I: OPERATING

INTRODUCTION OF RAILWAY OPERATIONS, ORGANIZATIONAL STRUCTURE AND FUNCTIONS

1

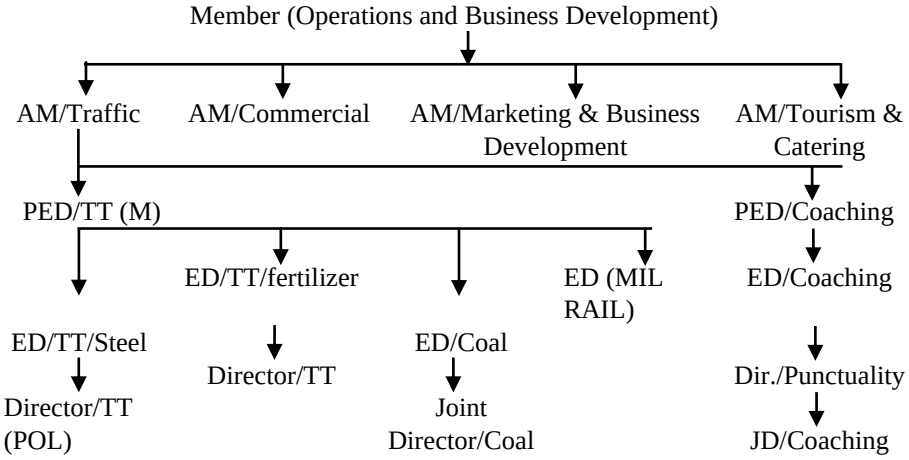
The operation of Railways is done by the operating department, which plays a crucial role as a coordinating unit responsible for developing and delivering transportation services. The operating department is intricately involved in overseeing train operations at multiple levels including Stations, Divisions, Zones, and Railway board. The primary level of operations is at railway stations, where Station Masters act as key coordinators with various departments directly or indirectly involved in Train operations.

At other major stations and yards, the responsibility of operations lies with Station Superintendents, Station Managers and Station Directors at even larger stations.

1.1 Organizational Structurer of Railway Operations at Railway Board Level

At the Railway Board level, Member Operations and Business Development (MO&BD) is the Apex level post for Traffic Cadre,

an ex-officio Secretary to GOI, in charge of Traffic Transportation, Coaching, Tourism and Catering, Commercial, Non-Fare revenue, Marketing and Business development and Information Technology. MO&BD is assisted by Additional Members (AMs) who are in charges for operations, commercial and Tourism & Catering departments. The organizational chart of operating department is as under:



For operations, Additional Member (Traffic Transportation) (AM (T)), looks after cadre related issues, inter departmental coordination, SPVs and Joint ventures etc. He is assisted by Principle Executive Director (PED), Traffic Transport Movement [PED (TTM)], who coordinates freight operations, balancing of freight flows, locomotives, rolling stock, non-Interlocking working and Traffic priority. PED (TTM) is assisted by Executive Director Traffic Transport Steel (EDTTS), who looks after Steel Traffic and Executive Director Traffic Transport Fertilizer (EDTTF) who looks after Fertilizer traffic and Executive Director Traffic Transport Coal (EDTTC). In addition to the above Director Petroleum Oil Products is responsible for POL and Automobile movement and Deputy

Director (Freight and Fertilizer) [DD(F&F)] also assists Senior Officers.

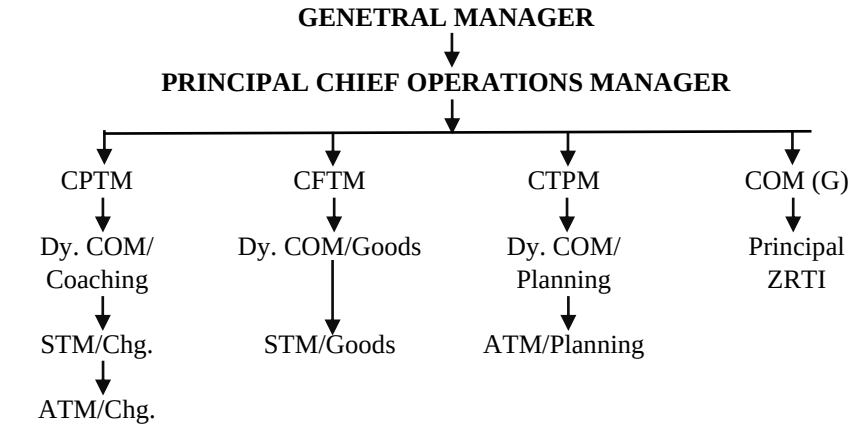
In Coaching Operations, PED (Coaching), ED (Coaching), Director (Coaching) and Director (Punctuality) are responsible for issues related to coaching trains.

The other positions manned by Traffic Department at Railway Board level are Executive Director (Planning) ED (Plg.), assisted by Director (Planning); Executive Director (Infrastructure) [ED (Infra.)], assisted by Director (Infrastructure); Executive Director (Gati Shakti) [ED(GS)], assisted by Deputy Director (Gati Shakti).

1.2 Organization Structure of Operations at Zonal Railway Level

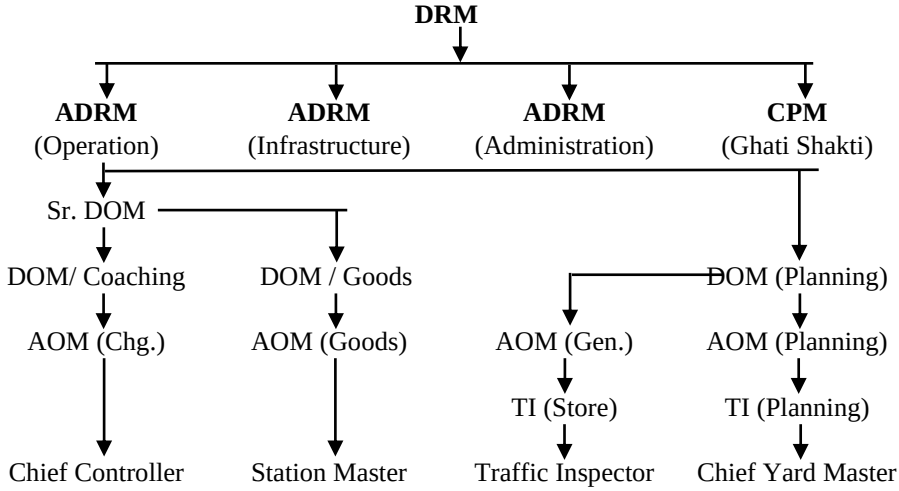
Principal Chief Operations Managers of the Zonal railways, supported by operating officers of different levels, closely monitor the performance of their divisions. Zonal headquarters help plan movement beyond Zone and resolve inter divisional operational issues. The Railway Board ensures seamless coordination between zonal railways and effectively manages the flow of trains across different zones contributing to the overall efficiency of Indian Railways vast network.

At Zone Principal Chief operations Manager (PCOM), is in charge and responsible for Operations. In a typical zonal set up, PCOM is supported by officers responsible for goods movement, Chief Freight Transport Manager (CFTM), Deputy Chief Operations Manager (Goods) (Dy. COM), Senior Transport Manager (STM Goods) and Assistant Transport Manager (ATM Goods). Similarly for coaching, Chief Passenger Transport Manager (CPTM), Dy. COM (Coaching), STM (Coaching), ATM (Coaching) assist PCOM. In addition to the above, for Safety and Traffic rules, Chief Operations Manager (General) COM(G) and for Planning related items, Chief Traffic Planning Manager (CTPM) also assist PCOM.



1.3 Railway Operations at Divisional Railway Administration Level

The Divisional Railway Office plays a pivotal role in managing and coordinating train operations within its jurisdiction. It ensures smooth and efficient train movements by coordinating the efforts of different stations falling under its purview. Moreover, it liaises with other divisions and zones to facilitate inter-divisional and inter-zonal Train Operations.



At the Divisional level, Senior Divisional Operations manager (Sr. DOM) holds a key position and is responsible for complete trains operations. In many large divisions, Sr. DOM is supported by Sr. DOM (Goods) and Sr. DOM (Coaching) to handle respective aspects of train movements. However, in most divisions, Divisional Operations Managers (DOMs) oversee coaching, goods and general (Rules and Safety) to assist Sr. DOMs. Below DOMs, there are Assistant Operations Managers (AOMs) who support their respective DOMs and Sr. DOMs in their day-to-day activities.

1.4 Functions of Operations Department

The Operations Department works as a coordinating Department between various functional departments such as civil, electrical, mechanical, and signal to run the trains. In railways, Traffic word is used in a very broader sense to indicate Train movement, number of Passengers, Quantity of commodity etc.

1. **Develop and Delivery of Transportation**:
   Besides providing transportation services to its current customers, Operations Department is also involved in identifying the market which can generate the traffic that can be carried by Railways. To facilitate movement of the increasing traffic, it is important to keep developing infrastructure. Operation department provides justification to construct Railway Line, Station or Goods Shed etc. The operating department uses the network to move the traffic from mines to factories and from there to urban and rural areas, through predetermined routes and frequencies.

2. **Control and Monitoring of Trains in Railway Network**:

   With the help of the Station masters, Signalling Systems and Satellite assisted navigation-based Locomotives and advanced Control Office Application Software the trains are located, monitored, guided and controlled in the network. Passenger train movement is pre planned in the form of a Timetable which has details about Origin- Destination stations, the number of stoppages, Number of staff manning the train, watering, enroute Cleaning etc. They are monitored from Divisional Control Offices to run on time. As per congestion and unusual occurrences the train movement is regulated and guided in the network.

   The Goods trains are run to respond to the market forces of demand and supply. So, supply of empty trains or Rakes to loader, then moving them towards unloading stations/ sidings / Goods Sheds by arranging crews, locomotives, and attending and resolving any issue which arises during its journey on real time basis.

3. **Efficiency and Optimum utilization of resources**:

   Railways have huge, fixed Capital costs and it takes many years to recover such cost. Transportation linked to the time, which is always perishable and cannot be stored. That means if the train is not loaded with Goods or occupied with Passengers, after the departure of the train the empty Space or Seats are worth for nothing.

Railway capacity is fixed or limited it cannot be increased immediately. So, the entire railway business operates to take out maximum output from the existing infrastructure. This is achieved by Punctual running of coaching Trains, Right time starting of the coaching trains, Interchange of Goods trains, reducing enroute detentions of the trains, maintaining tracks, Rolling stock in good fettle etc.

4. **Safety**:
   Safety is the number one priority in train operations, and it is inbuilt in every decision related to train movement. Safety and train operations are two sides of the same coin or two halves of the same whole. Safety of the Passengers, Staff and Railway assets is ensured through various safety practices, rules, Inspections, training, implementation of new technologies and with the coordination of the other Line departments.
5. **Maintenance of Assets**:
   Through Train Regulation, called Traffic Blocks, the time slots are provided to maintenance departments to maintain Track, Signal and Electrical Over Head Structures. This ensures higher consistent output from the infrastructural assets with little asset failures.
6. **Emergency Response**:
   During accidents and disasters, the Operating Department through large scale of mobilization of resources such as sending relief trains, coordinating with local and District

administration, NDRF for relief, rescue operations and restores traffic movement.

7. **Performance monitoring**:
   Through collection of data such as right time running of coaching trains and reasons for late running of trains, speeds of trains, reasons for Detentions of the trains, Passenger feedback (Rail Madad Application), Interchange of Goods Trains across divisional boundaries, quantity of commodities loaded or unloaded, Operating department continuously analyses the performance of the railways and takes corrective strategies.



BASICS OF TRAIN OPERATION

2

The basics of any railway operation involve the management and coordination of a variety of tasks required to transport passengers and goods safely and efficiently by rail. These tasks include:

1. Authorities or sources of railway operation like G&SR, Operating Manual, Station Working Rules, Block Working Manuals, Accident Manual, and other Rule Books.
2. Scheduling of trains like time tabeling of passenger carring trains and ordering of freight trains.
3. Reception, dispatch, Berthing, formation and controlling of the trains.
4. The management of crew i.e., loco pilots, assistant loco pilots, train manager.
5. Locomotives like Diesel Engine, Electrical Engine.
6. Rolling Stocks like Coaches, Wagons. Rolling stocks are also include electrical multiple units, diesel multiple units and self-propelled vehicle.
7. Maintenance of track, signal, overhead equipment (OHE), etc.

8. Safety and Security in train operation.
9. Fare, Freight, Customer service and efficiently monitoring delivery mechanism.

2.1 Authorities or sources of Railway Operations

In Indian Railways, the principal source and authority of Railway operation is General & Subsidiary Rules (G&SR). but other books are also important for railway operation as under:

1. **General And Subsidiary Rules (G&SR)**
2. **Operating Manual**
3. **Station Working Rules (SWR)**
4. **Accident Manual**
5. **Block Working Manual (BWM)**

1. General And Subsidiary Rules (G&SR)

General and subsidiary rules consist of general principles and rules of railway operation. The general rules are framed by Central Government based on provisions in The Railway Act 1989.

There are two separate sets of rules: General Rules and Subsidiary Rules, issued by the Railway Board and Zonal Railways, respectively.

General Rules are applicable throughout Indian Railways. They have primacy over any other rule in relation to the running of trains. General Rules consist of fundamental definitions about trains, stations, and signals. They also provide guidelines on how trains are controlled in the railway network through various types of signals, and how to run trains safely both in normal and abnormal conditions, in and between stations.

Subsidiary Rules are issued by the Principal Chief Operating Managers (PCOMs) of specific zones, and are suitable to the local prevailing conditions, such as

gradients, commodity loading, and traffic movement patterns.

Zonal Railway Training Institutes are established to train subordinate staff in Subsidiary Rules in addition to General Rules, to train them in operations.

2. Operating Manual

This is issued both by the Railway Board and all Zones. This is a detailed version of General and Subsidiary Rules consisting of Operational Aspects of running of trains. It covers all the issues of G&SR relating to Train Operations, Signalling System, Detailed duties of Operating Staff at stations, Divisions, Non-Interlocking Working Accident Management, Capacity augmentation and crew working rules and IT related issues of both Coaching and Goods Trains.

3. Station Working Rules (SWR)

These are instructions which guide the safe working of trains in the stations. These are based on General and Subsidiary rules but in every station the length of loop lines, gradient in each line etc. may vary so additional rules are provided for safe working of trains in and between stations.

The rules must be read in conjunction with the G&SR and are legally binding on the staff. These rules are framed and issued by Sr. DOM and Sr. DSTE.

The train staff at the station are required to read and understand these rules thoroughly and to give their acknowledgment in the assurance register provided for the purpose.

4. Accident Manual

Each Zonal Railway issues its own accident manual which details the coordinated effort, Rules, and Instructions to be

followed to save the lives or protect railway assets during accidents or unusual Occurrences. It covers types of accidents, role of various staff and departments at the accident site, mobilization of resources, Medical assistance, Reporting of accidents, information exchange, Investigation of accidents and accident inquiry, Role of CRS etc. and provides guidelines for rescue and restoration.

5. **Block Working Manual (BWM)**

   It is a set of rules and procedures that govern the safe working of trains in the station and Block Section. It is issued by the Principle Chief Operations Manager (PCOM) of each railway zone.

   The BWM covers issues such as the use of block instruments, the movement of trains, the handling of shunting movements, and the prevention of accidents.

2.2 Scheduling of trains

In Railway operation, scheduling of trains has an important place to attract business and maximum capacity utilization of the assets. It is always ensured by the train operator that trains arrive at their destinations on time and if freight trains are involved then those to be loaded, unloaded, and run efficiently. The scheduling of trains also ensures proper utilization of crew and maintenance practices, etc. Since present time is of information technology therefore Specialized software must be used to generate appropriate schedules of trains while keeping important aspect of railway operation like loco, wagons or coaches, crew, path, and adherence to rules, which are important for maintenance of safety.

2.3 Reception, dispatch, Berthing, formation and controlling of the trains

The trains are run and monitored by railway staff with set rules of working. There are specific rules for reception, dispatch, Birthing, formation and controlling of the trains, therefore it is the responsibility of the station master, loco pilots and more to the section controller to run the trains efficiently. Running the trains requires better coordination among various stack-holders to maintain schedule, efficiency and safety. The train controllers are responsible for monitoring the train locations, communicating with train crews through Stations Masters (SMs), and other field staff. The schedule of running of the train is adjusted as per timetable or as per necessity to regulate, if necessary. The basic objective of controller is to ensure that trains run safely and efficiently.

Traffic Controllers are also responsible for routing the trains and ensuring the safety of workers and crews working on railway tracks for maintenance or while granting line blocks. These functions are sometimes performed by one or multiple people depending on the size and complexity of the railway operation. These functions are usually performed from a Section Control Board or a Centralized Operations Control Centre.

2.4 The management of crew

The train crews include loco pilots and train managers, who operate the trains. Traffic controllers must manage crew schedules, assign crews to specific trains, and ensure crews are properly trained and equipped for their jobs. As part of this process, certain train crew supervisors, commonly called crew controllers, are responsible for monitoring the crew management.

The adherence of safety is an important part of management of crew as to ensure that crews are following their procedures and performing their work safely. Therefore, Training programs and on-job counselling are a must for crew consisting of mix classroom, on the job learning, drive time, job shadowing, and in some cases, time spent in a simulator to get exposure to less frequently occurring events. It is important that a comprehensive planning for training must be done for each crew.

2.5 Locomotives

Locomotives are most important asset to the railway operation. Indian Railways has diesel locomotives and electrical locomotives. Since, railway electrification work is in progress therefore, electrical locomotives are important for day-to-day operation. The detail of locomotives are given in Volume III of PRARAMBH, reading material of IRMS probationary officers.

2.6 Rolling Stocks

Rolling stocks in railways are primarly coaches and wagons. To run the trains, the availabilty of rolling stock is a necessity. Therefore, operating officer must keep close watch over availabilty of rolling stock. The freight rolling stock i.e., wagon's turn around is must to be watched. The maintenance of rolling stock, timely loading and un-loading and proper running can improve the availabilty of wagons which may improve the originating loading. The details of coaches and wagons and their types given in Volume III of PRARAMBH.

2.7 Maintenance of track, signal, overhead equipment (OHE), etc.

To ensure safety in railway operation, it requires regular maintenance to keep the tracks, signals, OHE, and other infrastructure in good working order. Maintenance tasks can

include track inspection and repair, signal maintenance, and rolling stock maintenance. Railways must have a comprehensive Asset Management Plan that details how they will perform their maintenance and keep the railway safe. Corrective and preventative maintenance is usually scheduled after trains have stopped running unless there is a critical need for it to be performed during service hours.

2.8 Safety and Security in train operation.

The railway officials must ensure the safety of passengers, crew, and cargo. Safety tasks can include conducting safety inspections, implementing safety protocols, and providing safety training to employees. This is a critical process for every railway operation. The railway safety department must conduct a variety training including track safety, fatigue management, hazardous materials, confined spaces, and working at heights, etc.

2.9 Fare, Freight, Customer service and efficiently managed delivery mechanism

The trains are run for business propositions and to earn money to meet expenses of railway and further development. It is most important that railway must have proper fare, freight competative to other mode of transport. Better customer care and service delivery mechanism ensure the customers to be continue with railways. It is always needed that the fare and freight structure of railway must be just and align to economics in the market. A regular wing must be created having experienced people in marketing cell to ensure the same.

2.10 Important Definition in Railway Operation and Safety

Following definitions must be known before understanding railway operations. These definitions are given in the Indian Railways (Open lines) General Rules. Commonly these rules are called General and Subsidiary Rules (G&SR). General Rules are framed by Central Government and Subsidiary Rules are framed by authorized officer of

a zonal railway, which is Principal Chief Operating Manager (PCOM). The general rules are amended time-to-time as per operation, maintenance, and safety requirement.

1. **Act**
   Act means The Railways Act., 1989 (24 of 1989).
2. **Adequate Distance**
   Adequate Distance means the distance sufficient to ensure safety.
3. **Approach Lighting**
   Approach Lighting means an arrangement in which the lighting of signals is controlled automatically by the approach of train.
4. **Approved Special Instructions**
   Approved Special Instructions means special instructions approved of or prescribed by the Commissioner of Railway Safety.
5. **Authorized Officer**
   Authorized Officer means the person who is duly empowered by general or special order of the Railway Administration, either by name or by virtue of his office, to issue instructions or to do any other thing.
6. **Authority To Proceed**
   Authority To Proceed means the authority given to the Loco Pilot of the train, under the system of working, to enter the block section with his train.
7. **Axle Counter**
   Axle Counter means an electrical device which, when provided at two given points on the track, proves by counting axles in and counting axles out, whether the section of the track between the said two points is clear or occupied.
8. **Block Back**
   Block Back means to dispatch a message from a block station intimating to the block station immediately in rear on a double line, or to the next block station on either side

on a single line, that the block section is obstructed or is to be obstructed.

9. **Block Forward**
   Block Forward means to dispatch a message from a block station on a double line intimating to the block station immediately in advance the fact that the block section in advance is obstructed or is to be obstructed.
10. **Block Section**
    Block Section means that portion of the running line between two block stations on to which no running train may enter until Line Clear has been received from the block station at the other end of the block section.
11. **Centralized Traffic Control**
    Centralized Traffic Control means a system by which the working of trains over a route, to which the system applies, is governed by fixed signals remotely controlled from a designated place.
12. **Centralized Traffic Control Operator**
    Centralized Traffic Control Operator means the person on duty who may for the time being be responsible for the working of trains on the Centralized Traffic Control;
13. **Commissioner of Railway Safety**
    Commissioner of Railway Safety means an Inspector appointed to exercise any functions under the Act and includes an Additional Commissioner of Railway Safety.
14. **Competent Railway Servant**
    Competent Railway Servant means a railway servant duly qualified to undertake and perform the duties entrusted to him.

15. **Connections**
    Connections when used with reference to a running line, means the points and crossings or other appliances used to connect such line with other lines or to cross it.
16. **Controller**

Controller means a railway servant on duty who may for the time be responsible for regulating the working of traffic on a section of a railway provided with the system of speech communication.

17. **Day**

Day means from sunrise to sunset.

18. **Direction of Traffic** means –

a) on a double line, the direction for which the line is signalled.

b) on a single line, the direction for the time being established, under the system of working, to allow trains to move in that direction; established, under the system of working, to allow trains to move in that direction.

19. **Loco Pilot**

Loco Pilot means the engine driver or any other competent railway servant for the time overseeing driving a train.

20. **Electrical Communication Instrument**

Electrical Communication Instrument means either a telephone or a Morse telegraph instrument.

21. **Facing And Trailing Points:**

Facing And Trailing Points are facing or trailing in accordance with the direction a train or vehicle moves over them. Points are said to be facing points when by their operation a train approaching them can be directly diverted from the line upon which it is running.

22. **Fixed Signal**

Fixed Signal means a signal of fixed location indicating a condition affecting the movement of a train and includes a semaphore arm or disc or fixed light for use by day and fixed light for use by night.

23. **Fouling Mark**

Fouling Mark means the mark at which the infringement of fixed Standard Dimensions occurs, where two lines

cross or join one another.

24. Gangman

Gangman means a railway servant employed on permanent way or work connected there with.

25. Gangmate

Gangmate means the person in charge of a gang of workmen employed on permanent way or work connected therewith.

26. Gateman

Gateman means a competent railway servant posted at a level crossing for working the gates.

27. Goods Train

Goods Train means a train (other than a material train) intended solely or mainly for the carriage of animals or goods.

28. Guard

Guard means the railway servant in charge of a train and includes a Brakes man or any other railway servant who may for the time being performing the duties of a Guard.

29. Inspector of Way or Works

Inspector of Way or Works means any Inspector or Assistant Inspector responsible for the construction or maintenance of permanent way, point and signals, bridges or other works connected therewith.

30. Interlocking

Interlocking means an arrangement of signals, points and other appliances, operated from a panel or lever frame, so interconnected by mechanical locking or electrical locking or both that their operation must take place in proper sequence to ensure safety.

31. Intermediate Block Post

Intermediate Block Post means a class 'C' station on a single line or double line or multiple line remotely controlled form the block station in rear.

32. Intermediate Block Signalling

Intermediate Block Signalling means an arrangement of signaling on single line or double line or multiple line in which a long block section is split into two portions each constituting a separate block section by providing an intermediate Block Post.

33. Isolation

Isolation means an arrangement, secured by the setting of points or other approved means, to protect the line so isolated from the danger of obstruction from other connected line or lines.

34. Last Stop Signal

Last Stop Signal means the fixed Stop signal of a station controlling the entry of trains into the next block section.

35. Level Crossing

Level Crossing means the intersection of road with railway track at the same level.

36. Level Crossing Gate

Level Crossing Gate means any form of movable barrier, including a chain, capable of being closed across the road at the level crossing, but does not include a wicket or a turnstile for the use of pedestrians.

37. Line Clear

Line Clear means the permission given from a block station to a block station in rear for a train to leave the latter and approach the former; or the permission obtained by a block station from a block station in advance for a train to leave the former and proceed towards the latter.

38. Main Line

Main Line means the line ordinarily used for running trains through and between stations.

39. Material Train

Material Train means a departmental train intended solely or mainly for carriage of railway material when picked up or put down or for execution of works, either between stations or within station limits.

40. Mixed Train

Mixed Train means a train intended for the carriage of passengers and goods, or of passengers, animals and goods.

41. Multiple-Aspect Signalling

Multiple-Aspect Signalling means a signalling arrangement in which signals display at any one time any one of the three or more aspects and in which the aspect of every signal is prewarned by the aspect of the previous signal or signals.

42. Night

Night means from sunset to sunrise.

43. Obstruction and its cognate expressions include a train, vehicle or obstacle on or fouling a line, or a stop signal at "on" or any condition which is dangerous to trains.

44. Overhead Equipment

Overhead Equipment means the electrical conductors over the tracks together with their associated fittings, insulators and other attachments, by means of which they are suspended and registered in position for the purpose of electric traction.

45. Passenger Train

Passenger Train means a train intended solely or mainly for the carriage of passengers and other coaching traffic and includes a troop train.

46. Point And Trap Indicators are not signals, but are appliances fitted to and working with points to indicate by day or by night the position in which the points are set.

47. Running Line

Running Line means the line governed by one or more signals and includes connections, if any, used by a train when entering or leaving a station or when passing through a station or between stations.

48. Running Train

Running Train means a train which has started under an

authority to proceed and has not completed its journey.

49. "Shunting" means the movement of a vehicle or vehicles with or without an engine or of any engine or any other self- propelled vehicle, for the purpose of attaching, detaching or transfer or for any other purpose.

50. Special Instructions

Special Instructions means instructions issued from time to time by the authorized officer in respect to particular cases or special circumstances.

51. Station

Station means any place on a line of railway at which traffic is dealt with, or at which an authority to proceed is given under the system of working.

52. Station Limits

Station Limits means the portion of a railway which is under the control of a Station Master and is situated between the outermost signals of the station or as may be specified by special instructions.

53. Station Master

Station Master means the person on duty who is for the time being responsible for the working of the traffic within station limits, and includes any person who is for the time being in independent charge of the working of any signals and responsible for the working of trains under the system of working in force.

54. "Station Section" means that section of station limits –

1. At a class 'B' station provided with two aspect signals, which is included: -
   a) on a double line, between the home signal and the last Stop signal of the station in either direction; or
   b) on a single line: -
      i. between the shunting limits boards or advanced starter (if any) or
      ii. between the home signals if there are no shunting Limit Boards or Advanced Starters, or

iii. between the outermost facing points, if there are no home signals or Shunting Limit Boards or Advanced Starters.

2. At a class 'B' station provided with manually operated multiple-aspect or modified lower quadrant signals, which is included: -
   a) on a double line: -
      i. between the outermost facing points and the last Stop signal of the Station in either direction or
      ii. between the Block Section Limit Board, where provided and the last Stop signal of the station in either direction; or
   b) on a single line: -
      i. between the Shunting Limit Boards or Advanced Starters (if any), or
      ii. between the outermost facing points, if there are no Shunting Limit Boards or Advanced Starters.

55. Subsidiary Rule

Subsidiary Rule means a special instruction which is subservient to the General Rule to which it relates and shall not be at variance with any General Rule.

56. System of Working

System of Working means the system adopted for the time being for the working of trains on any portion of a railway.

57. Track Circuit

Track Circuit means an electrical circuit provided to detect the presence of a vehicle on a portion of track, the rails of the track forming part of the circuit.

58. Train

Train means an engine with or without vehicles attached, or any self-propelled vehicle with or without a trailer, which cannot be readily lifted off the track.

59. Train Examiner

Train Examiner means a railway servant duly qualified to examine trains and certify their fitness for safe running and

includes any other railway servant who may for the time being perform the duties of a Train Examiner.

60. Two-Aspect Signalling

Two-Aspect Signalling means a signalling arrangement in which each signal displays at any one time either of the two aspects.

General Rules & Subsidiary Rules - The General Rules apply to all Railways. The Subsidiary Rules are prefixed S. R. and apply only to Northern Railway

Revision of Rules - The General Rules are issued and are liable to revision by the Government of India (Railway Board) and Subsidiary rules by the General Manager.

Authority to issue SRs is vested with the Principal Chief Operations Manager alone. It is not delegated to any other officer. Revisions will be notified by Amendment slips.

Authority to issue Working Rules and Instructions.

a) The Principal Chief Operations Manager is authorized to issue working rules and instructions.

b) Powers to issue working rules and instructions is also delegated personally to Sr. Divisional Operations Managers/Divisional Operations Managers within their Divisions. No other Officer has authority to issue working rules and instructions except, when necessary, in an emergency and then only in the name of Sr. Divisional Operations Manager/Divisional Operations Manager.

c) All Working Rules and Instructions must be in conformity with the General and Subsidiary Rules and is equally binding on the staff.

d) Working Rules of stations must be sent to the Commissioner of Railway Safety for approval before they are brought into use if they involve any matter in which the General Rules require the issue of Approved Special Instructions.

Definition of Engines-

The following terms are used to designate engines according to the work on which they are employed: -

a) A train engine is an engine which hauls a running train beyond station limits.
b) An Advance Pilot is an engine which runs in advance of a train as a Safety Precaution.
c) An assisting engine is an extra engine attached to a train which is too heavy to be hauled by train engine alone.
d) A banking engine is an assisting engine used to help a train up to a heavy grade. It usually pushes the train.
e) A relief engine is an engine sent out in the place of another engine which has broken down, has been damaged or has been derailed; or to bring in vehicle which through some accidents have been left outside station limits.
f) An attached engine is an engine other than a train, assisting, banking or relief engine, attached to train running outside station limits.
g) A light engine is an engine running outside station limits without vehicles attached.
h) A shunting engine or pilot is an engine specially provided for shunting trains/or vehicles.

Train Despatcher –

At certain large stations two Assistant Station Masters are on duty at a time. The Assistant Station Master entrusted with line clear working and the control of signals for the reception and dispatch of trains, in addition to any other duties that may be allotted to him, is designated 'Train Despatcher'. At stations at which Train Despatcher is provided the working rules must clearly specify their duties and responsibilities in respect of reception and dispatch of trains.

2.11 Classification of Stations: -

1. Stations shall, for the purpose of these rules, be divided into two categories - block stations and non-block stations.
2. Block stations are those at which the Loco Pilot must obtain an authority to proceed under the system of working to enter the block section with his train; and under the Absolute Block System consists of three classes.
    - **Class 'A' Stations -** where Line Clear may not be given for a train unless the line on which it is intended to receive the train is clear for at least 400 meters beyond the home signal, or up to the Starter.
    - **Class 'B' Stations -** where Line Clear may be given for a train before the line has been cleared for the reception of the train within the station section; and
    - **Class 'C' Stations -** block huts, where line clear may not be given for a train, unless the whole of the last preceding train has passed completely at least 400 meters beyond the home signal and is continuing its journey. This shall include an Intermediate Block Post.
    - **Non-block stations or Class 'D'** Stations are stopping places which are situated between two consecutive block stations, and do not form the boundary of any block section.

SIGNALS

3

The working of trains is governed by General Rules (GR) of Indian Railways. The signaling system is designed to comply these rules technically, in consideration of technical feasibility and financial aspects vis-à-vis manageability of compliance of these General Rules manually versus mechanization, depending upon density of traffic and speed of the trains permitted in the section.The guidelines for technical measures for compliance of these General Rules are given in Signal Engineering Manual and Railway Opening of Public carriage Rules. The latest General Rules taken into consideration are as issued in the year 2007 and Signal Engineering Manual Volume-I, I988 and Volume –II of 2001.

3.1 Generally used terms:

i) **Approved special instructions** means special instructions approved of or prescribed by the Commissioner of Railway Safety. [GR 1.02 (4)]

ii) **Special Instructions**: Instructions issued from time to time by the authorized officer in respect to cases or

special circumstances. [GR 1.02 (53)].

iii) **Running Line:** the line governed by one or more signals and includes connections, if any, used by a train when entering or leaving a station or when passing through a station or between stations. [GR 1.02 (47)].

iv) **Running train**: a train which has started under an authority to proceed and has not completed its journey. [GR 1.02 (48)].

v) **Shunting**: The movements of a vehicle or vehicles with or without an engine or of any engine or any other self-propelled vehicle, for the purpose of attaching, detaching or transfer or for any other purpose. [GR 1.02 (49)].

3.2 Station:

A station is that part of track where train traffic is dealt with to stop, dispatch,make trains run-through, perform shunting, loading unloading of goods, watering of coaches, maintenance and many other activities for a goods or passenger train. As per General Rule 1.02. (51), issued by Indian Railways, the station is defined as "any place on a line of railway at whichtraffic is dealt with, or at which an authority to proceed is given under the system of working". The station is sectionalized in two parts i.e. Station section and Station limits.

Classification of Stations:

In the present context, stations are classified with reference to operational facilities and standard of interlocking.

The speed of the trains in a particular section is broadly guided by the standard of track, the standard of rolling stock, and the ruling gradient.

The operational facilities at the stations as well as type of interlocking and the system of signalling at the stations also affect average speed of the section. The electrical/solid state

interlocking operated through central panel reduces operational time by way of eliminating inter cabin coordination as well as faster operation as compared to interlocking in mechanical lever frames, or panels in end cabins. The system of colour light signalling also similarly reduces operation time as compared to semaphore signalling system.

It is pertinent to note that the standard of interlocking at the station does not function as ruling factor for deciding speed of the section.

Classification of stations based on operational requirements: [GR 1.03] Stations are classified as 'Block Stations' and 'Non-Block Stations'.

Block Stations are those stations at which the Loco Pilot must obtain an authority to proceed under the system of working to enter the block section with his train. The Block station, under the Absolute Block system consists of three classes viz. class `A', class `B' and class `C'. However, when any station which cannot be worked under `A', `B', or `C' class is termed as `Special' class station [GR 1.03]. These stations are characterised by the conditions for granting line clear under GR 8.02, 8.03 and 8.04 as follows:

i) **Class `A' stations**: Stations where Line Clear may not be given for a train, unless the line on which it is intended to receive the train is clear for at least 400 meters beyondthe Home Signal, or up to the Starter signal.

ii) **Class `B' stations**: Stations where Line Clear may be given for a train before the linehas been cleared for the reception of the train within station section; and

iii) **Class `C' stations**: The capacity of a section to accommodate trains, if gets saturated i.e. trains running in a specific section are more than the section

can accommodate, the longer block section is bifurcated by creating a **Block Hut** or, on a double line section, an **Intermediate Block post**, in between. In this way two trains can be run in the sectionwhere only one train was running. This is a small step as an alternative of Automatic Block Signalling, where more than two trains can be run by splitting the Block section into smaller Automatic Block sections.

a) **Block Hut** is a 'C' class station for the purpose of splitting the block working only, where Line Clear may not be given for a train, unless the whole of the last preceding train has passed complete at least 400 meters beyond the home signal and is continuing its journey. This also includes Intermediate Block Post.

b) **Intermediate Block Post** means a class "C" station on a double line remotely controlled from the block station in rear.

The Signalling arrangement on an Intermediate Block post is to split a longblock section into two portions each constituting a separate block section providing an intermediate Block Post.

iv) **Non-Block stations or class 'D' stations** are scheduled stopping stations for specified trains. These stations are situated between two consecutive block stations, and do not form the boundary of any block section. The stations at which there is outlying siding are also called DK station and those where there is no siding, are also called as flag station.

Classification of stations based on Standard of Interlocking and The Standards of Interlocking

On Indian railways three standards of interlockingwere prescribed prior to introduction of Signal Engineering Manual Volume-I 1988. On introduction of Signal Engineering Manual Volume-I, 1988,

these standards were enhanced to five standards and then subsequently modified to four, restricting maximum speed from unrestricted as permitted through Signal Engineering Manual in force prior to the introduction of Signal engineering Manual 1988, to a maximum of 160 Kilometres per hour through Correction slip No. 6 to SEM 1988 clause 7.131.

i) The standards of interlocking decide the maximum permissible speed of the train across the station. For example, the maximum permissible speed of the train on which the train can run-through across a station provided with standard-I interlocking, is 50 Kilometers per hour. This in turn decides the minimum equipment of signals, point fittings, isolation, type of signalling system, type of operating system and type of interlocking. These are chosen in such a way that it is possible to achieve desired level of speed of the train at and across the station with maximum safety, minimum operation time, minimum levelof human involvement and minimum financial implications, corresponding to the given speed.

ii) The minimum equipment of signals as provided for any of the standards of interlocking may by be increased depending upon operational requirements but not to the extent that it changes the given standard of interlocking.

iii) The classification of standards of interlocking on all Indian railways with reference to the maximum allowable speed of the trains, minimum equipment required at suchstations as well as other features as prevalent before the introduction of Signal Engineering Manual 1988, are tabulated below in table number

Table: Signals in stations with Standard I interlocking		
1	**Standard :**	**I**
1.1	Allowable speed:	50 kilometer per hour
1.2	Isolation:	
It is recommended that main line be isolated but it is not compulsory if, in every case, in which trains are permitted to run through on non-isolated line, all shunting is stopped and no vehicle which is not attached to an engine or not properly secured by the Station Master in accordance with approved special instructions, is kept standing on a connected line which is not isolated from the through line (clause 4.11 & 5.23 of General rule book 2007).		
1.3	Signals:	
1.3.1	In semaphore signalling system:	
1.3.1.1	Outer and Warner to be provided. Provision of starter signal is optional;	
1.3.1.2	Warner signal shall be provided for Meter Gauge stations where trains run through, if considered necessary;	
1.3.1.3	All signals shall be operated from an interlocked frame under control of Station Master.	
1.3.1.4	On the section with light traffic the outer signal may be operated from the location near the facing point ensuring that Outer signal shall not be possible to be taken 'Off'unless home signal has been taken 'Off'.	
1.3.1.5	In exceptional cases, under approved special instructions, Warner where provided,may be operated from the same location as that of outer such that Warner cannot be taken 'Off' unless other relevant signals for main line have been taken 'Off' and lineclear has been taken in advance	
1.3.1.6	In exceptional cases, under approved special instructions two home signals may beplaced on the same post in lieu of bracketed home signal. The top arm shall apply to main line and the lower one to shall apply to other lines;	
1.3.2	In Multiple Aspect Signalling system:	
	A Distant and a Home signal in each direction.	
1.4	Points:	
	Facing points shall be equipped with:	
1.4.1	A key lock of approved type;	
1.4.2	A means for locking each switch independently;	
1.4.3	A means for preventing the points from being unlocked during the passage of train; unless the arrangement is such that a key is used to release the signals and cannot be brought back to the points until such signals have been put back to 'On' position;	
1.4.4	A means for detecting each switch independently by respective signals;	

1.4.5	A gauge ties plate where steel sleepers are not provided.
1.5	Interlocking:
1.5.1	Interlocking between points and signals may be carried out by means of key locks and shall be so arranged that the Station Master cannot lower a fixed signal for the movement of a train unless all facing points falling in the route of the train are properly set and locked.
1.5.2	If Warner signals are provided the interlocking between the Warner signal and thepoints must extend to the trailing points.
1.5.3	Where the interlocking between points and signals is electrically transmitted the insulation of the line wires used in connections therewith shall be of the same standard as laid down as laid down for installation of block instruments;
1.5.4	Interlocking between points and signals must ensure that no signal can be taken 'Off'to admit a train online that has been fitted with a tarp switch unless the trap switch has been closed.

Table: Signals in stations with Standard II interlocking

2	**Standard :**	**II**
2.1	Allowable speed:	75 KMPH
2.2	Isolation:	
	Required, with the condition that the line on which the train is to run has beenisolated from all other lines by the setting of points or other approved means and interlocking is such as to maintain this condition during the passage of the train. (Clause 4.11 of General rule book 2007).	
2.3	Signals:	
2.3.1	In semaphore signalling system:	
2.3.1.1	Outer, Warner and bracketed home signals must be provided. Provision of starter isoptional;	
2.3.1.2	Taking 'Off' of Warner signal shall be dependent upon the receipt of line clear on the block instrument;	
2.3.2	In Multiple Aspect Signalling system:	
	A Distant, a Home and a starter signal in each direction	
2.4	Points:	
	Facing points shall be equipped with:	
2.4.1	A plunger type facing point lock. If the plunger is hand operated or economical locktype, its full travel should be detected by relevant signal.	
2.4.2	A means for locking each switch independently;	

2.4.3	A means for preventing the points from being unlocked during the passage of train; unless the arrangement is such that a key is used to release the signals and cannot be brought back to the points until such signals have been put back to 'On' position;
2.4.4	A means for detecting each switch independently by respective signals;
2.4.5	A gauge tie plate where steel sleepers are not provided.
2.5	Interlocking:
2.5.1	The interlocking between points and signals may be direct or indirect. Where indirect interlocking is used signals shall be operated from a position under the control of the Station Master, and a key must be provided to enable the Station Master to lock upthe signal frame. The interlocking between points and signals must be carried out under the same conditions as prescribed for standard – I and must ensure that all trailing points are correctly set and held in position by the lowering of signal for movement over them. When points and signals are operated from locations at either end of the station the interlocking between points and signals must be direct and must ensure the same conditions as laid down for direct interlocking. The Station Master must be provided with a control over the Home and Last stop signal.

Table: Signals in stations with Standard III interlocking

3	**Standard:**	**III**
3.1	Allowable speed:	Unrestricted
3.2	Isolation:	
	Required, with the condition that the line on which the train is to run has beenisolated from all other lines by the setting of points or other approved means and interlocking is such as to maintain this condition during the passage of the train. (Clause 4.11 of General rule book 2007).	
3.3	Signals:	
3.3.1	In semaphore signalling system:	
	Outer, Warner, Bracketed home signals and Starter signals must be provided while Advanced starter signals may be provided as and where necessary;	
3.3.2	In Multiple Aspect Signalling system:	
	A Distant, a Home and a starter signal in each direction.	
3.3	**Points:**	
3.3.1	A plunger type facing point lock;	
3.3.2	A means for detecting the full travel of the lock plunger by related signals when the lock and switches are operated by the same lever.	

	(Operation of lock and switches by the same lever has since been stopped);
3.3.3	It is desirable that plunger detection may also be provided for independently operated facing point locks.
3.3.4	A means for detecting each switch independently by respective signals;
3.3.5	A means for detecting each switch independently;
3.3.6	A gauge tie plate where steel sleepers are not provided.
3.4	**Interlocking:**
3.4.1	The interlocking between points and signals must be direct. For this the operation system of all signalling functions shall be essentially centralized at one place in one frame or cabinet.

Table showing Standards of Interlocking and associated minimum equipment of Signals andPoints before introduction of SEM 1988.

SN	Features	**Standard I**	**Standard II**	**Standard III**	**Standard IV**
	Allowable speed	Up to 50 KMPH	Up to 110 KMPH	Up to 140 KMPH	Up to 160 KMPH
1	Isolation	Required *	Required	Required	Required
2	Signalling	2 Aspect/ MultiAspect	2 Aspect/ Multi Aspect	Multi Aspect	Multi Aspect
3	Double Distant	Not required	Required	Required	Required
4	Point Operation	Mechanical	Mechanical/ Electrical	Mechanical/ Electrical	Electrical
5	Point locking	Key/Facing Point Lock / Hand Plunger Lock	Facing Point Lock / Point machine	Facing Point Lock / Point machine	Point machine (Clamp type is desirable)
6	Point detection	Mechanical/ Electrical	Mechanical/ Electrical	Mechanical/ Electrical	Electrical
7	Lock detection	Not Required	Required	Required	Required
8	Interlocking	Key/ Mechanical	Mechanical/ Electrical/ Electronics	Mechanical/ Electrical/ Electronics	Electronics
9	Track circuiting to be done of:	Not required	1. Mech. Interlocking – Main run through lines	All running lines	All running lines

			2. Elect. / Electronic interlocking – All running lines		
10	Block working (min)	Token	Token/SGE	SGE/Track circuit #	SGE/Track circuit #
11	Preventing signal passing at danger	Not required	Not required	Not required	Desirable

* but not compulsory subject to in every case in which trains are permitted to run through on non-isolated line, all shunting shall be stopped and no vehicle which is not attached to an engine or not properly secured by the Station Master in accordance with approved special instructions, may be kept standing on a connected line which is not isolated from the through line (Clause 4.11 & 5.23 of General rule book 2007).

Abbreviations used in the table-

SGE - The type of double line block instrument.

At stations where central panel is provided or at high density routes, means for verifying complete arrival of trains by suitable means shall be required.

Table showing Standards of Interlocking and associated minimum equipment of Signals and Points with the introduction of SEM 1988.

3.3 Station Limits:

This is complete area of station yard under the control of Station Master and is covered by outermost signals of the station except where otherwise specified by railway authorities under special instructions. As per General Rule book 2007, clause 1.01(52) issued by Indian Railways, Station limit is defined as "the portion of railway which is under the control of a Station Master and is situated between the outermost signals of the station or as may be specified by special instructions". The Station Master is responsible for all happenings in the Station Limits.

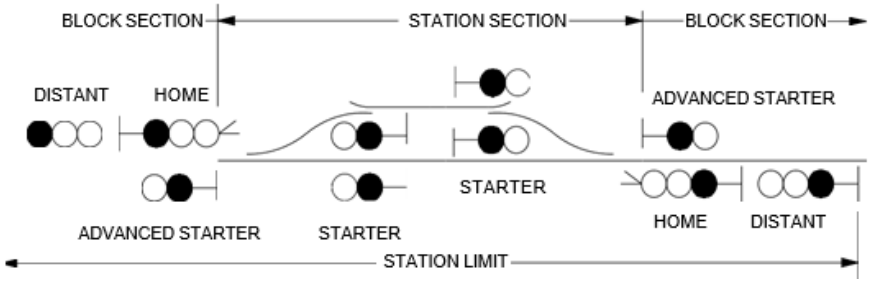


Fig. Station section, Block section and Station Limit

Station Section and Block Section:

The entire area of track over which a train traverses is sectionalized into two main segments viz. (i) Station section and (ii) Block section for semaphore & MACLS signalling area on single & double line.

3.4 Station Section:

Station section is that part of Station Limits which is not covered by Block Section. The area of station section varies with the class of station, situated on a double line or single line section. Based upon General Rules 1.01(54), Station section means:

That section of the station limits at a class `B' station provided with two aspect signals,which is included:

i) on a double line, between Home signal and the Last Stop signal of the station in eitherdirection; or

ii) on a single line:
   a) between the Shunting Limit Boards or Advanced Starters (if any), or
   b) between the home signals if there are no shunting Limit Boards or AdvancedStarters, or
   c) between the outermost facing points, if there are no home signals or Shunting Limit Boards or Advanced Starters.

At a class `B' station, provided with manually operated multiple aspect or modified lower quadrant signals, which is included:

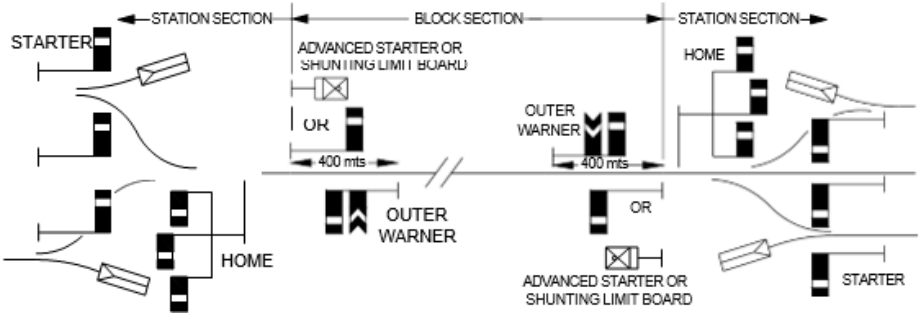
i) On double line:

a) Between the outermost facing points and the Last Stop signal of the station on either direction; or

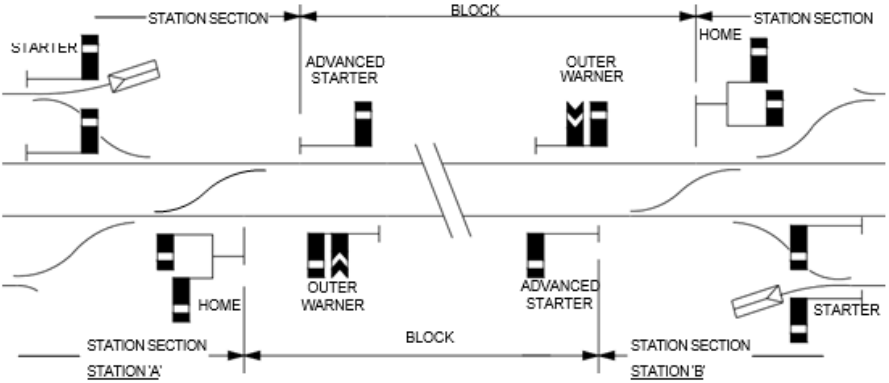
b) Between the Block Section Limit Board, where provided, and the Last Stop signalof the station in either direction; or

ii) On single line:

Between the Shunting Limit Board or Advanced starters (if any) or between the outermost facing points, if there are no Shunting Limit Boards or AdvancedStarters.



Block section & station section on `B' class stations on single line section in two aspects signalling territory.



Block section & station section on `B' class station on a double line section in two aspect signalling territory.

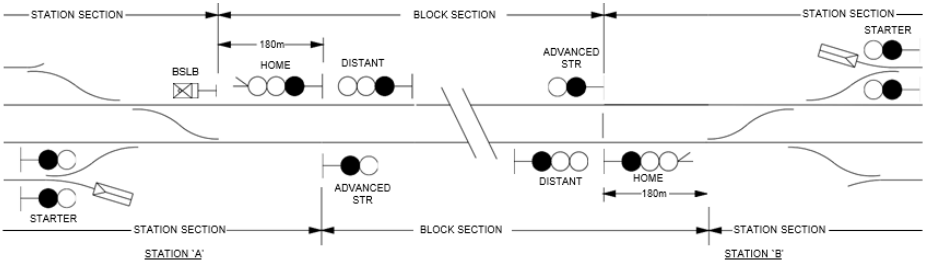
The Station Section and Block Section of class 'A' & 'C' stations overlap each other while station section of class `Special' station is defined based upon the layout of the station.

Here, it is very important to understand the difference between Station Section and Station Limits.

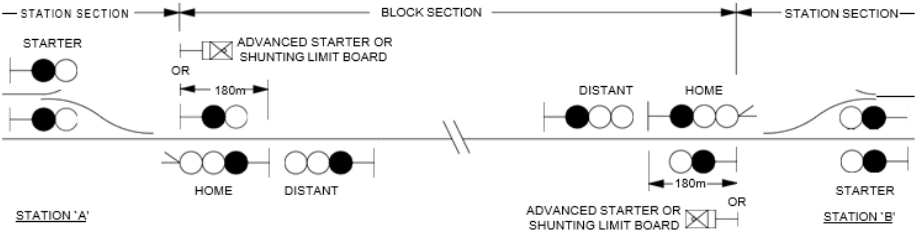
3.5 Block Section:

As per General Rules book, clause 1.01(10), Block section is that portion of running line between two block stations on to which no running train may enter until Line Clear has been received from the Block station at the other end of the block section for semaphore & MACLS signalling area on single & double line.

The Block Station is the station on either ends of a Block Section.



Station section & Block section for Multi Aspect Signals on `B' class station on double line section



Station section & Block section for Multi Aspect Signals on `B' class station on single line section

3.6 Fixed Signal:

Signal of fixed location called as fixed signal is the means through which the status of the track on which the train is to move, is communicated to the driver of the train, now designated as Loco

Pilot, by the Station Master at the station or by a train running in the Automatic Block Signalling section ahead of other train. As per General Rule book clause 1.02.(21), issued by Indian Railways, the fixed signal is defined as "signal of fixed location indicating a condition affecting the movement of a train and includes a semaphore arm or disk orfixed light for use by day and fixed light by night". This signal can be a semaphore arm or a colour light, housed on a signal post.

3.7 Signals are classified by their:

i) Structural design,
ii) Usage, and
iii)Placement

Signals are also used depending upon geographical terrain, traffic requirement, economical consideration traction in the section, and modernization in signalling system.

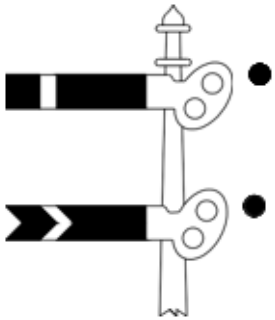
Classification of fixed signals based on structural design: These signals, depending upon their structural design are `Semaphore Lower quadrant, Semaphore Upper quadrant, Modified Lower quadrant, and Colour light signals.

Details of signal posts, arms of semaphore signals and signal units of colour light signals shallbe discussed in ensuing volume of this book.

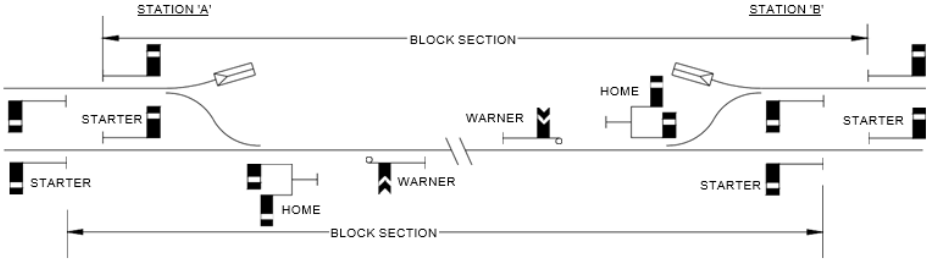
Mechanical semaphore signal:

1. **Two aspect lower quadrant signalling system**:
   The word `semaphore' was used first by a Greek historian: `Sema' stands for sign and `Phor' means to bear. A semaphore signal consists of a spectacle, as it looks like a human spectacle, and an arm fixed to it. The following Fig shows Stop and Warner signals on the same post. The arm of stop signal is square ended, painted red with a white strip at the tail end of the signal arm while the Warner signal is fish tailed painted red with a white strip in the same profile as the fish

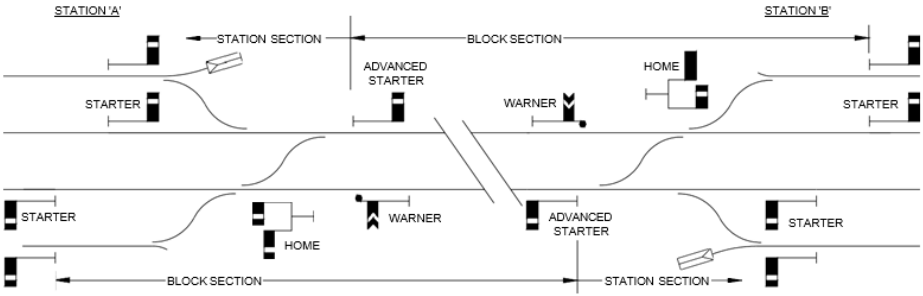
tail of the arm, at the tail end of the signal arm. The spectacle bears coloured glasses, which are red, yellow or green depending upon the aspect to be displayed. A lamp with the lens to send a focused beam of lightthrough the coloured glasses, is pivoted on a base plate with a pin fixed to a signal post.



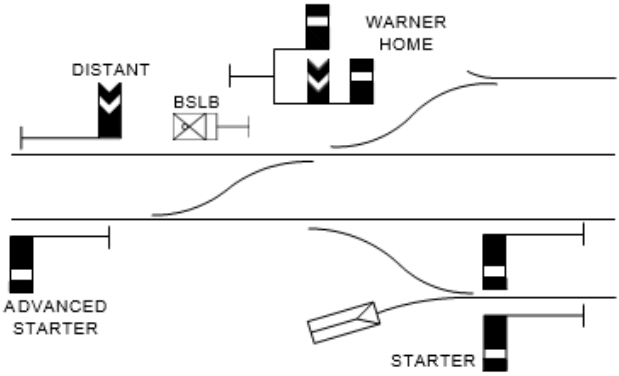
Two aspect semaphore signal showing Warnerbelow outer on the same post.



Overlapping station section & Block section for 2 aspect signals on `A' class station on single line section



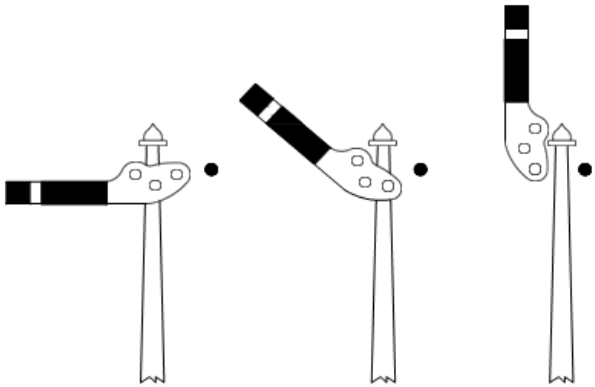
Station section & Block section for 2 aspect signals on A class double line section



Modified lower quadrant signalling system.

2. **Modified lower quadrant signalling system** Looking at the constraint that a lower quadrant semaphore signal could display only two aspects i.e. arm at horizontal position showing stop in the day and showing red light also in the night,which was grossly inadequate with the traffic moving at faster speed the two aspect semaphore signalswere modified by placingWarner signal below the main line home signal on the same doll on which the homesignal was placed. The home signal is preceded by a Distant signal. With this the approaching Loco Pilot did not have to face first signal of the station as a stop signal while coming from the block section. A pre-warning serves the same purpose as multiple aspects signalling system.
3. **Multiple aspect Upper quadrant signalling system.**
Lower quadrant two aspect signalling system has limitation of communication, which is slightly improved bymodified lower quadrant signalling system. In the upper quadrant multiple aspect Signalling system the arm and light arrangement is similar to two aspect semaphore signals. The 'ON' aspect is displayed by horizontal position of arm while caution aspect is displayed by arm raised to 45^0 above horizontal & proceed

aspect by arm raised to 90^0 above horizontal. It has an advantage of communication being of multi aspects added by improved visibility in hilly terrain, while in case of lower quadrant signalling the third aspect could not be achieved as the signal arm if lowered by another 45^0 got merged with the signal post while in upper quadrant this aspect is visible, giving advantage of one more aspect.



Multi aspect upper quadrant signals showing three aspects.

3.8 Multiple aspect colour light signalling system:

The colour light signals, simple in structure have all the advantages of communication and visibility both in day and night. Rightly so, the colour light signalling system operated by central panel has been scheduled for operation in all new installations or replacements.

The signal unit houses signal lamp, a transformer to convert 110V AC to 12V AC, and a Lamp checking relay, meant to monitor the status of the lamp.

The lamp could be two pole double filament, one filament being main and other being auxiliary or it could be three pole double filament lamp. In case of twopole double filament lamp fusing of any of the filament shall be detected by dropping of thelamp checking relay, which shall be treated by the preceding signal as

lamp fused & accordingly less restrictive aspect, shall be displayed by it. The lamp therefore is required immediate replacement. In case of three pole double filament lamp, the fusing of one filament shall result in switching over to the other filament, while simultaneously giving indication to the Assistant Station Master that one filament has been fused.

However, in this case the preceding signal shall not detect this situation as lamp fused continue displaying the aspect as in normal case. The lamp replacement may be done as early as possible. This arrangement as such is an added advantage over the two pole lamps. In both cases the signal is not blanked off. The signal unit is provided with a couplet of stepped lenses, outer one being clear while inner one is coloured red or yellow or green.

The electric signal lamp is placed at the focal point of the lenses couplet such that the desired colour focussed parallel beam of light is emitted. The unit is available in two, three and four aspect configurations.

Now with the advent of High power Light Emitting Diodes (LEDs), the cluster of LEDs assealed and focussed signals in the form of a unit, is being used, housed in the same signal unitsin place of 12 Volt signal lamps and lenses. The LED signal unit is lighted by 110V AC or 110V DC eliminating use of 110V/12V transformer. With the use of LEDs the frequent signal going blank due to fusing of incandescent signal lamps has been literally reduced to zero.

Junction type route indicators are used with multiple aspect signals. The signal unit is provided on an offset bracket mounted on the signal post & route indicator on the top of the signal. This route indicator is capable of providing six route arms, being fixed with each hexagonal face while for main or straight line no arm in the route indicator is provided. With this the limit ofarm type route indicator is indication for seven routes only. The arm type unit is in

two parts, the central part is with hexagonal shape each face to accommodate one arm of four lamps. The central body accommodates one lamp called as pilot lamp and is common to all six arms, all the five lamps placed in route indicator unit form a row. The unit is provided with clear lens, each lamp displaying focussed white lunar light. The route indicator is provided on the top of signal post in such a way that top of the signal unit is just below route indicator. For more than seven routes, `Theatre' type route indicators are used which display the number of the line on whichthe train is being received, through an array of lamps lighted to form the numbers.

The below figure shows multiple aspect colour light signal and a route indicator with one arm with a four-aspect colour light signal unit.



Multiple aspect Colour Light Signal and route indicator

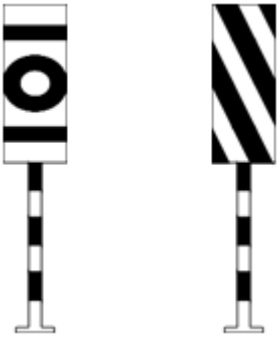
3.9 Visibility of signals:

The Loco Pilot of the train is very much dependent of visibility of the signals. Some time is taken by any human being between seeing or hearing something and reacting to the same. This time between seeing or hearing and reacting to the same, is known as reaction time. So is the case with the Loco Pilot. This time is taken to be seven seconds. A train moving at a speed of 100 kilometres per hour shall traverse 194 metres in seven seconds.

The second major factor to decide minimum visibility of the signal is the braking distance, which in turn depends on the braking power, total mass of the train, gradient and the speed of the train. Taking into consideration all of these factors the minimum visibility of the signals has been prescribed to be as follows: [G & SR (NCR) 3.26/3]

Type of signalling system	Visibility
(A) **Two aspect lower quadrant signalling system**:	
i) Outer signal	With 100 KMPH Section speed, 1200 Metres
	With less than 100 KMPH Section speed, 800 Metres
ii) Warner signal on a post by itself	400 Metres
iii) Home, main line starter and Advanced starter signals	Each signal should be visible from its previous stop signal
iv) Loop line starter signal	200 Metres
v) Warning Boards: Boards of different design for passenger and goods trains at a distance of 1000 Metres, and 1400 metres are provided in rear of first stop signal for passenger and goods trains respectively to warn the Loco Pilot of approaching train that he is approaching first stop signal. (fig 6.1.3)	
(B) **Multiple Aspect signalling system**:	
i) Distant signal	400 Metres and if Inner Distant is also provided the visibility for Inner Distant shall also be 400 metres
ii) All other signals at station	Aspect of each signal shall be visible from its previous signal in the direction of the train
(C) Where adequate visibility of stop signal cannot be maintained, repeater or Co-acting signal shall be provided or speed restriction shall be imposed if the desired level of visibility is not available.	
(D) If no signal indication is available to the Loco Pilot, he shall control the train considering that the next signal is red.	
(E) **Warning Boards**: Warning Board on its face, facing the approaching train is provided at a distance of 1000 metres with zebra design and 1400 metres with a circle in between two horizontalbands, painted in yellow on black background, in rear of first stop signal for passenger trains and goods trains respectively in case of two aspectsignalling	

territory to warn the Loco Pilot that heis approaching first stop signal. If no signal indication is visible from the sighting board, the Loco Pilot shall control his train assuming that the stop signal ahead is On. [GR & SR (NCR) 3.262/4]



Goods & passenger warning boards

Classification of fixed signal based on usage:

The fixed signal is used as a Stop signal, Warner or Distant signal, Shunt signal, Calling- on signal, Gate signal, Repeater signal, Co-acting signal, Goods signal, Automatic Block signal and a signal with `A' marker.

For the purpose of identification meant for specific use the signals are provided with markers on the signals posts. These markers are alphabets or symbols clamped with the signal arm or post incase of semaphore signals and written on circular plate clamped on signal post below the signal unit in case of colour light signals.

3.10 Stop Signal:

This signal essentially has a Stop aspect, which is its normal aspect also, be it a two aspect lower quadrant, Modified Lower Quadrant (MLQ), Multiple Aspect Upper Quadrant (MAUQ) semaphore signal or a Multiple Aspect Colour Light Signal (MACLS). Other aspect is 'Off' aspect. The Loco Pilot shall not pass this signal when the signal is 'On' except when authorised by the Station Master under a written authority to pass the signal at danger.

Warner or Distant signal:

The signal is called Warner signal in case of two aspect signalling system whether it is a semaphore signalling system or colour light signalling system and Distant signal in case of Multi Aspect Signalling system. The signal is provided with a `P' marker, which is the letter `P, painted in black on a white circular disk clamped on the signal post. The normal aspect of Warner or Distant signal is 'Caution' in case of lower quadrant two aspect signalling system, Upper Quadrant Multiple Aspect Signalling system and Multiple Aspect Colour Light signalling system. This signal does not have Stop aspect. In case of Multiple Aspect Colour Light signalling System 'Attention' aspect is also given in addition to caution aspect.

There being no Stop aspect on this signal the Loco Pilot is never required to stop on this signal except when the signal light is extinguished. On a Warner or Distant signal provided with `P' marker if the signal light is extinguished during night and also during daytime in case of Multiple aspect colour light signal the Loco Pilot shall stop at this signal, the Loco Pilot shall move with cautious speed prepared to stop at the next signal only after satisfying himself thatthe signal is provide with a `P' marker. In case `P' marker is not there it shall not be possible for the Loco Pilot to distinguish between a Stop signal and a Warner or Distant signal (in case the arm of semaphore signal is also not visible), which in turn can result in passing a signal atdanger or waiting on a Warner / Distant signal for which Station Master shall not be issuing a written authority to proceed, there by detaining the train unduly. This makes 'P' marker very important.

3.11 Shunt signal:

Shunting is a process of attachment, detachment, placement of any vehicle to or from a train which is attached or not to an engine, with or without the help of an engine. Shunt signals are meant for

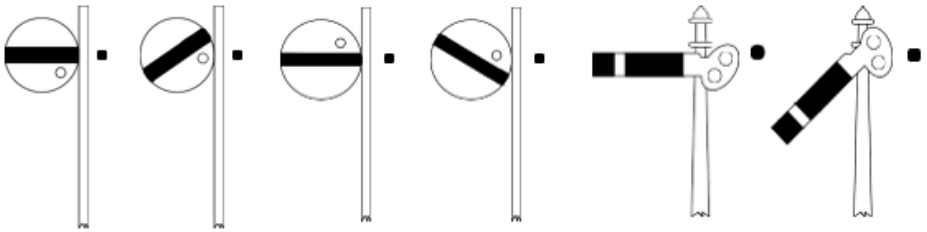
signalled shunting in the interlocked station section performed with a loco motive engine. The shunt signal leads moment from one shunt signal to the next shunt or stop signal whichever falls first in the route.

Shunt Signal in Semaphore signalling system

Shunt signals are of two types i.e.

i) miniaturized spectacle with a miniaturized arm and
ii) of 'disk' type which is a circular disk painted white with a red horizontal strip on its face.

When taken off, in case of miniaturized arm type shunt signal the arm is painted red. During nighttime it displays red light when `On' and a yellow light when taken 'Off'. In case of disk type, it displays the red strip in horizontal position when `On' and inclined to 45 degree to horizontal. During nighttime the aspects displayed are red and yellow respectively. These signals may be mounted on a post by itself or on the same post as that of running signal depending upon operational requirements.

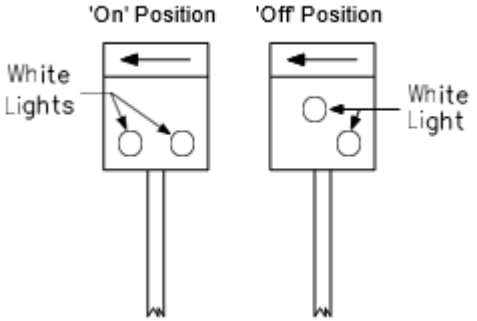


Semaphore shunt signals from left to right Disk type in two aspect territory, in multipleaspect territory and arm type, mounted on post by itself, showing 'On' & 'Off' aspects.

Shunt Signal in Colour light signalling system.

Shunt signal is mounted on a post by itself or on the same post as that of a running signal based upon operational requirement. When mounted on a post byitself it displays two lunar white lights placed

to form a horizontal line meaning thereby its 'On' aspect akin to 'On' aspect of a semaphore signal which means dead stop and two lunar white lights placed to form a line inclined at an angle 45^0 to horizontal, meaning thereby its 'Off'- aspect akin to 'Off' aspect of a semaphore signal which means proceed.



Colour light shunt signal mounted on postby itself showing 'On' & 'Off' aspects

One of the lamps is common in formation of line horizontal and inclined and is known as pilot lamp. When mounted on the same post as that of a running signal it displays no light as `On' aspect and two lunar white lights placed to form a line inclined at an angle $45^0$ to horizontal meaning thereby its `Off' aspect.

The signal cannot be used for direct reception or despatch of a train from or to the Block section or Automatic Block section. The signal may be mounted on apost by itself and when it is mounted on the post of a running signal it is mounted on an elbow (an offset bracket) below the running signal.

When a shunt signal is mounted on the same post as that of a running signal, both main and shunt signal cannot be taken 'Off' at the same time. Either the main signal shall be taken `Off' or the shunt signal at any one time.

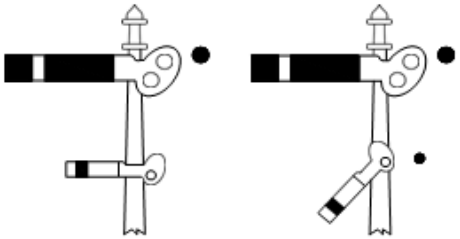
3.12 Calling-on signal:

In bigger yards where reception signal is placed at such a distance and on a route with high density traffic where loss of time to the train is with serious consequences resulting in queuing up of

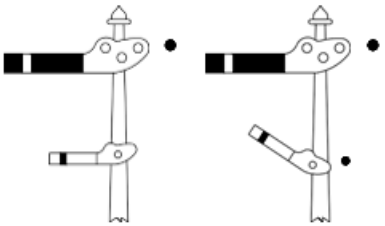
following trains, the Calling-on signal is provided onthe same post as that of reception signal below the main signal arm or unit to receive the train when the main running signal has failed or the train has to be received on an occupied line.

The Calling-on signal and the main signal on the post of which the Calling-on signal has been provided, cannot be taken `Off' simultaneously. The Calling on signal may also be provided on the post of signals other than reception signals, under special approved instructions except on thepost of last stop signal.

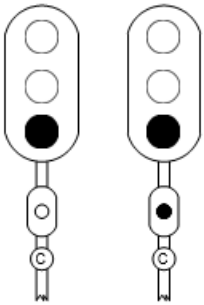
Calling-on Signal in Semaphore Signalling system, [GR 3.13] be it lower quadrant or upper quadrant it has miniaturized spectacle fitted with a miniaturized arm painted white in colour with a red strip near the end of the arm. The signal displays the arm in horizontal position to show 'On' aspect during daytime. In the case of lower quadrant signalling system the arm is inclined to 45 degrees below horizontal and in case of upper quadrant system the arm is inclines to 45 degrees above horizontal to display 'Off' aspect during daytime and also shows yellow light during nighttime.



Miniature arm lower quadrant calling onsignal fixed below main stop signal.



Miniature arm upper quadrant calling onsignal fixed below main stop signal



Miniature colour light calling on signal fixedbelow main stop signal

Calling-On Signal in Colour light signalling system.

It is miniaturised unit provided on the same post as that of the corresponding main signal on an elbow (Offset bracket), below the running signal unit. It displays no light in `On' aspect and miniaturised yellow light as `Off' aspect during day as well as nighttime.

It must be ensured that the train approaching the concerned reception signal has come toa stop before the Calling-on signal acquires 'Off' aspect.

Gate signal

Level crossing gate falling in the Block section, when interlocked, is provided with the Gate signals on either side of the gate to protect the road traffic across the gate. It is provided at a distance of 180 metres in case of multiple aspects signalling system and at a distance of 400 metres in case of two aspect signalling system, from the edge of the road on either side. The signal is preceded by a Warner or Distant signal depending upon the system of signalling of the section. A gate signal is essentially same in structure and design as a stop signal in semaphore signalling system as well as in Colour light signalling system provided with a 'G' marker on its

post in addition.

The ‘G’ marker is letter ‘G’ painted in black on a circular disk painted yellow. The disk is clamped with the signal post. The gateman posted on duty at the level crossing gate is not competent to issue authority to pass the gate signal on red. The provision of the `G’ marker on the signal distinguishes the signal for following rules of the gate signal.

(i) On a gate signal in Block Section, the Loco Pilot shall stop at the signal & whistle in prescribed code, wait for one minute during day and for two minutes during night and if the signal is not taken ‘Off’ during this time the Loco Pilot shall move his train ahead cautiously up to level crossing and if the gate man is available and exhibiting all right signal he shall pass the gate cautiously but in case the gateman is not available or is available but not exhibiting alright signal, it shall be ensured that the gate is closed and then pass the gate cautiously following the hand signal by the gate man or in his absenceby one of the engine crew members of the train.

(ii) The gate signal provided in the Automatic Block Signalling section is provided with ‘A’marker and a ‘G’ marker. The ‘A’ marker is the letter ‘A’ stencil cut on black painted glass sheet on the face of ‘A’ marker signal unit or, which is provided on an offset bracket on the same signal post to which is qualifies. In case of LED signals where used the letter

`A’ is displayed in the face of the LED signal unit. The ‘G’ marker is the letter ‘G’ painted in black on a circular disk painted yellow and clamped on the signal post. The ‘A’ marker is lighted to show that the Gate is closed and locked against road traffic. When the ‘A’ marker is not lit the signal is treated as manual signal and provisions of Gate signal provided on an interlocked gate in Block section in Absolute block signalling section shall be followed as described above in paragraph (i).

(iii) The gate provided in the station sections are protected by the main running signals of thestation and are accordingly interlocked to these signals.



LED `A' marker, fixed on gate signal in Automatic Block section area with a `G' marker

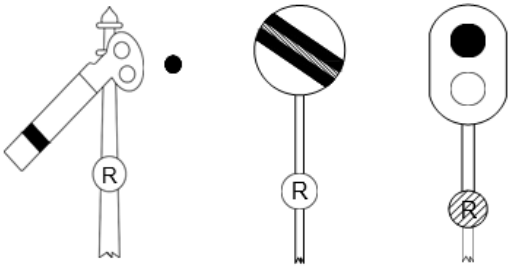
'A' Marker on signals in station section: The signals provided with `A' marker in the station section wherein adjoining section is worked as Automatic Block signalling section when lit means that the signal is working as automatic signal and when the `A' marker is not lit it means that the signal is working as manual stop signal and the Loco Pilot shall follow rules of manually operated signals.

Repeater signal: In cases when a signal is not visible to the Loco Pilot from adequate distance due to curvature or any other reasons or in cases where signal is not visible to the guard of the train at the rear end of a platform, a repeater signal is provided at a suitable convenient position in rear of main signal.

A repeater signal is provided with an 'R' marker and is of the following type.

i. A square ended semaphore arm painted yellow with a black band near the tail end of the arm.
ii. A Colour light repeating signal.
iii. A rotary or disc banner type signal.

These three types of repeating signals in their `Off' position are shown in fig. below. It is pertinent to note that a repeater signal essentially does not have a red aspect. The post of semaphore repeater signal is provided with a white circular disk painted with letter `R' in black while the post of colour light signal is provided with a black circular disk panted with letter `R' in white.

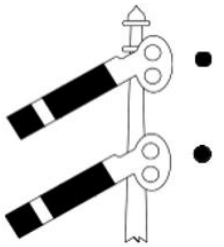


Off aspects of repeater signals semaphore , banner type andcolour light from left to right

The 'On' aspect in case of semaphore repeater signalduring day is a horizontal armpainted yellow with a blackband at the square end of the arm, and during night it displays yellow colour light.This signal displays greenlight during nighttime when taken `Off', its arm inclinedto 45^0 below horizontal.

The Banner type repeater signal disk is painted with black strip across its diameter with a yellow strip in the middle of it, which is horizontal when the signal is `On' and inclinedto $45^0$ when `Off' The colour light repeater signal displays green colour to repeat the `Off'aspect of the main signal and yellow colour when `On'.

3.13 Co-acting signal



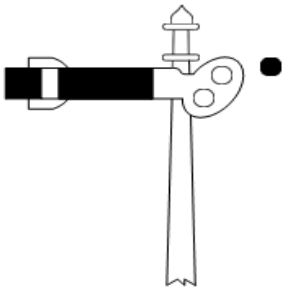
Off aspect of Co-acting signals

The signal to which the train is approaching should be continuously visible to the Loco Pilot. Whenever a signal is not visible to the Loco Pilot continuously obstructed by over bridge, flyover, or any other structure, another signal is placed on the same post, as that of main signal, at a suitable height to enable continuous visibility of the signal to the Loco Pilot. This signal known as co-acting signal is an exactreplica and moves in unison together with its main signal semaphore signal as well as colour light signal.

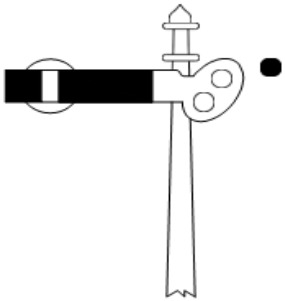
3.14 Dock signal

A semaphore reception signal provided with stencil cut letter 'D'on the signal arm encircling the white strip of red painted arm provided

on a post by itself or on a doll along with other running signals leads the train to dock platform.



On aspect of Dock signal



On aspect of Goods signal

Signals at class `D' station:

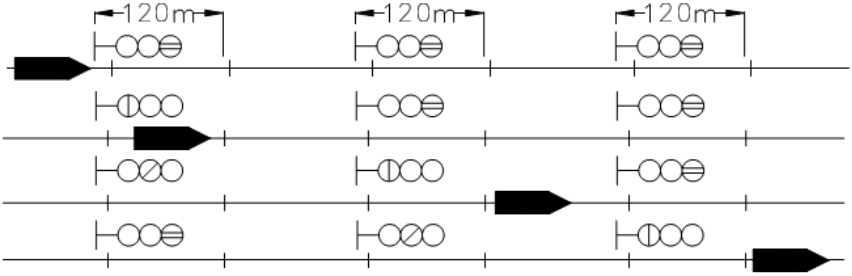
At a `D' class station, a train may be stopped under manner authorised by special instructions. To indicate to the Loco Pilot that he was approaching a `D' class station an indicator board shall be provided by the Engineering department with letter `H' of 300 mm height, painted black on a sheet. Painted yellow at a distance of 600 metres from the centre line of the station. The board shall be 600mm X 600mm.on a 2 Metres post painted white and black alternate strips of 300 mm height each.

3.15 Automatic Block signal:

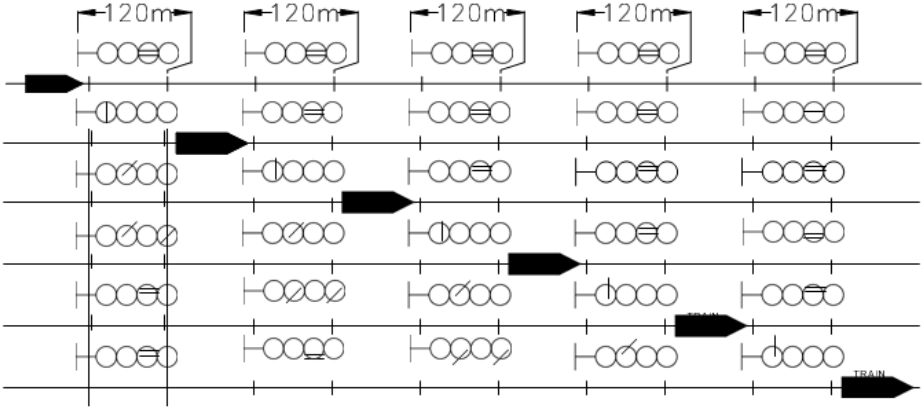
The Automatic Block signals are either three aspect or four aspect Colour Light signals. In three aspect signalling scheme each signal has essentially red, yellow, and green aspects It shall have double yellow aspect also if the signal is a in four aspect signalling scheme. The normal aspect of this signal is always green. The aspects of these signals are controlled by passage of the train. As soon as a train passes over the track circuit ahead of the Automatic Block signal, the aspect of the signal becomes red.

As the train moves on and not only clears the next signal but also signal overlap beyond the same, the aspect of the signals turns to yellow, and this keeps on changing to double yellow and green as

the train moves ahead of next to next signal along with overlap and then next to next to next along with overlap. The following train shall be guided by the aspects as being displayed to it as per extent rules. The aspect sequence, with reference to train movement may be seen in fig below in three aspect signalling areas and in four aspect signalling section.



Aspect sequence of three aspect Automatic Block signal



Aspect sequence of four aspect Automatic Block signal

The 'Position', 'Aspect' and 'Indication' of signals:

The signal is only means of communication between the persons at the ground and the Loco Pilot or any other person on the Loco. For communication, there is always a language. The language used for

this communication is a combination of `Position' `Aspect' and 'Indication' of the signal as discussed below:

i) **Position of the signal**:

Any signal shall have two `Positions' which is `On' or `Off'.The arm of a semaphore signal shall be painted with the same colour as the light it displays during night in its horizontal position, this position of Semaphore signal is called `On position' The arm is painted red in case of sop signal and yellow in case of a Warner signal. Both signals, when their arm is horizontal, shall be said to be in their `Onposition'. Since the colour light signal displays the same light during day as it displays during night, it is called to be in `On position' when it is normal, it may be a Stop signal or a Distant signal. Any other position of the arm of semaphore or colour light signal is called 'Off position' except in case of a signal in Automatic Block signalling territory. In Automatic Block Signalling area only colour light signals are to be provided. The signals remain in `Off' position normally.

ii) **Aspects of the signal**:

A Stop signals, in its 'On position' conveys 'Stop Aspect' whilea Warner or Distant signal in its 'On position' conveys 'Caution aspect'.

A two aspect semaphore stop signal in its `Off position', arm inclined to $45^0$ below horizontal and a green light by night, conveys `Proceed Aspect' while; A Multiple Aspect Upper Quadrant semaphore signal inclined to 45^0 above horizontal with a yellow light by night or a Colour Light Signal displaying yellow colour light, in its `Offposition' conveys `Caution Aspect'.

A Multiple Aspect Upper Quadrant semaphore signal raised to 90^0 above horizontalwith green light by night or a colour light signal displaying green colour light, in its 'Off position' conveys `Proceed Aspect'.

A Multiple Aspect Colour Light Signal displaying double yellow colour lights, in its `Off position' conveys `Attention Aspect'.

iii) **Indication conveyed by the Aspect of the signal**:

The detailed meaning of the Aspect of signals is of a certain

meaning to the Loco Pilot or any observer.

a) The stop aspect indicates stop dead.
b) Proceed aspect indicates proceed. Here Proceed means proceed with the maximum permissible speed in the area.
c) The caution aspect indicates proceed and be prepared to stop at the next stop signal.
d) Attention aspect indicates proceed and be prepared to pass next signal at such restricted speed as may be prescribed by special instructions. In this situation if the train is indicated to move on straight line, the next signal shall be passed on Caution aspect prepared to stop at next signal with Stop aspect, but if the train is indicated to traverse a 1 in 8 ½ turnout, the Loco Pilot shall have to restrict the speed at 15 kilometers per hour or if the turnout happens to be I in 12, the speed shall be restricted to 15 kilometer per hour and so on. The speed on 1 in 12 turnouts has been increased on certain sections to 30 KMPH.

The Aspects and corresponding indications are tabulated below-

Position	**Aspect**	**Indication**
Two aspect Semaphore stop signal:		
'On'	Stop	Stop Dead
'Off'	Proceed*	Proceed
Outer & Warner on the same post:		
Outer 'On' & Warner 'On'	Stop	Stop dead
Outer 'Off' & Warner 'On'	Proceed*	Proceed with caution
Outer 'Off' & Warner 'Off'	Proceed*	Proceed
Multiple Aspect Signal:		
'On'	Stop	Stop Dead
'Off '	Caution	Proceed & be prepared to stop at next signal.
'Off '	Attention	Proceed & be prepared to pass the next signal at such restricted speed as may be prescribed by special instructions
'Off '	Proceed*	Proceed
Modified Lower quadrant: Main line Home and Warner on the same doll:		
Home 'On' & Warner 'On'	Stop	Stop dead

Home 'Off' & Warner 'On'	caution	Proceed & be prepared to stop at next signal
Home 'Off' & Warner 'Off'	Proceed*	Proceed
Shunt signal semaphore & colour light:		
'On'	Stop	Stop dead
'Off'	Proceed slow*	Proceed with caution for shunting
Calling on signals:		
'On'	- -	Loco Pilot should follow the aspect of main signal.
'Off'	Proceed slow*	Stop and then draw ahead with caution and be prepared to stop short of any obstruction

Automatic Block Signal on single or double line:		
'On'	Stop	Stop for one minute in the day and two minutes during night and then follow theprocedure.
'Off'	Proceed*	Proceed
'A' marker on semi-automatic Stop signal:		
White illuminated letter 'A' against black background.	- -	The stop signal is working as Automatic signal. Follow rules of Automatic signal.
Letter 'A' extinguished	- -	The stop signal is working as Manual stop signal. Follow rules of stop signal.
Intermediate Block stop signal:		Same as home signal provided at intermediate block post
Co acting signals:	Same as main signal	
Repeating signals:		-
'On'	- -	Signal to which it repeats is 'On', proceed to stop at the signal to which it repeats.
'Off'	- -	Signal which it repeats is 'Off', proceed tothe signal to which it repeats and act according to the aspect after reaching there.
Goods signal:		

'On'	Stop	Stop dead
'Off'	Proceed*	Proceed, signal is for goods running line only.
Dock signal:		
	Stop	Stop dead
	Proceed*	Proceed, for Dock Platform only

*Here proceed means proceed at maximum permissible speed permitted for the section.

The aspects, indications, and their meaning

Classification of signals based on placement:

On a station, a fixed signal can beplaced as reception or a departure signal.

3.16 Reception signals:

In two aspect semaphore signalling system reception signals are Outer, Warner and Home. In Multiple aspect signalling system reception signals are Distant and Home.

(i) Warner /Distant signal: In two aspect signalling area the first signal faced by the Loco Pilot is Warner. This signal is placed on a post by itself or two meters below the Outer signal on the same post as Outer. The arm of the signal is fish tailed with its face paintedred with a white band parallel to the fish tail.

When placed on a post by itself a fixed green light is provided 1.5 to 2 meters above the arm. The signal shows by night, a red light when in `On' position and a green light whenin `Off' position along with the fixed green light above it. The fixed green light is replaced by the Outer signal when the Warner is placed on the same post as Outersignal.

Two aspect colour light Warner signal also displays same aspects by day and night both as semaphore signals display by night in both situations as when placed on a postby itself or on the same post as outer signal.

Distant signal in Modified, two aspect semaphore signalling territory: The arm ofthe distant signal is fish tailed, its face painted yellow with a black band parallel to the

fish tail. The signal shows yellow colour light by night when `On' and one green when taken `Off'.

The **Distant signal in Upper Quadrant** arrangement is such that a hole provided in the disk moving with the arm obstructs the yellow light of the lamp placed 1.5 meters belowthe arm, such that the view of the fixed lamp is obstructed in other two positions of the arm of the signal except when it is inclined to 45^0 to the horizontal.

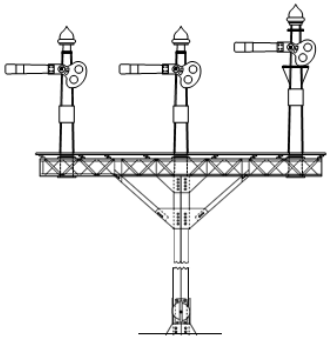
Distant signal in Semaphore Multiple Aspect Upper Quadrant (MAUQ) signalling territory has fish tailed arm with its face painted yellow with a black band painted parallel to the fish tail. This shows yellow light by night when `On', one yellow light with another yellow light when inclined to $45^0$ above horizontal and green light when `Off' at 90^0 above horizontal.

Distant signal in Multiple Aspect Colour Light signalling territory, also displays the same colours as MAUQ signals by day as well as by night. In sections with Rajdhani trains route or where heavy Haul goods trains are run, two distant signals are provided preceding home signal. The first Distance signal encountered by the Loco Pilot is calleddistant signal. Its signal post is painted with black and yellow strips of 12" each. The next distant signal post is painted with aluminum paint. Both the signals are provided with a `P' marker plate on their post and otherwise are identical.

(ii) Outer signal: An Outer signal is the first stop and reception signal in two aspect lower quadrant signalling section only. The placement of the Outer signal varies depending upon the section being single line or double line. In the case of two aspects signalling the adequatedistance beyond the first stop signal of the station is 400 metres as such in case of double line section the outer is placed at 400 meters from the next

reception signal i.e. home signal. If the section is single line, the outer signal must be placed 400 meters from the last stop signal which is opposite Advanced starter signal. The advanced starter signal is placed 120 meters from the last trailing point in the single line section. The block section extends not only up to first stop signal but also an adequate distance beyond the first stop signal which is 400 meters in this case as such with the entry of the train inside outer signal and clearing the adequate distance of 400 meters the train enters Station Section having cleared the Block section.

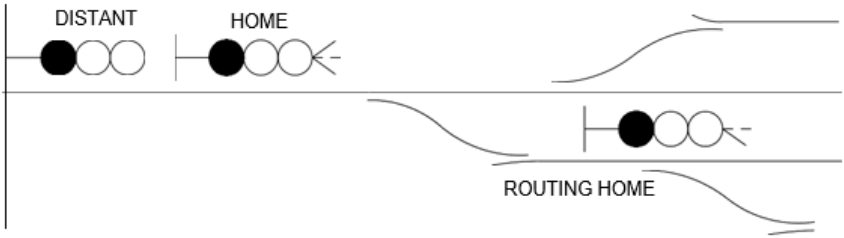
(iii) Home signal, Routing Home signal & Route indicators: After the outer signal, the next reception signal towards the station is Home signal. The purpose of this signal is to inform Loco Pilot of the line to which the train is being received. In two aspect lower quadrant or colour light signalling section home signal is provided right at the entrance, short of points meant for diversion of the train to the nominated line because the block overlap is provided just beyond outer signal. There are different signals on small posts called Dolls mounted on a `gantry' provided on single signal post, for different lines in case there is more than one line for the train to be received. The doll bearing the main line signal is kept higher than all other dolls on the same gantry while the signals must be placed in sequence such that the outermost signal pertains to the outermost line and the inner most to innermost line. This arrangement works as route indicator to the Loco Pilot.



Semaphore Home and routing homesignals on a gantry

In some cases when under approved special instructions two or more signals are to beprovided on the same post, the topmost signal shall apply to the extreme left line,next signal to next line and so on so forth. Under exceptional circumstances two homesignals are to be provided on the same post,the main line signal shall be placed higher than the other signal.

In the Multiple Aspect Colour Light signallingsection**,** the home signal post and unit are one for all reception lines. When there is more than one reception line, a route indicator isprovided on the top of the signal post which indicates the route on which train is intended to be received. When Junction Type, i.e. five lamps lit in a row formation, route indicator is used, the maximum routes that can be covered by one such route indicator are seven. In such a situation another home signalis provided just before second set of reception lines. When it is not considered to provide another intermediate signal for another bunch of routes, theatre type route indicator is used which displays routes in numerals formed by array of lamps, when the number of routes to be indicated by the signal is more than 7. However, the theatre type of route indicator shall be used to display a maximum number of ten routes.



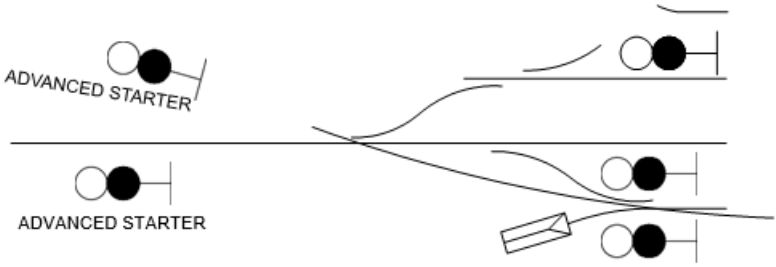
Colour light Home and routing home signals

3.17 Departure signals:

Starter and Advanced starter signals are departure signals. A signal at a block station which is controlled by the block instrument and after passage of this signal thetrain enters the block section is also known as Last Stop signal (LSS).

(i) **Starter signal:** This is the first signal permitting dispatch of a train from the station. The signal is provided at the departure end of each line. In case there is no Advanced Starter at the station this signal is interlocked with the block instrument and permitsentry of the train into the block section only when the line clear has been obtained from the station in advance. The starter signal is provided with a route indicator if more than one line is taking 'Off' from the station. However, when Advanced starter is provided at the station the starter signal permits movement of the train up to advanced starter signal only and is not interlocked with the Block instrument. The starter signal is not used for shunting.

(ii) **Advanced Starter signal:** This signal is the last stop signal of the station and isinterlocked with the Block instrument in such a way that it is not possible to take this signal 'Off' unless line clear has been obtained from the station in advance.
An independent Advanced starter signal is provided for each main or branch line taking 'Off' from the station provided after all points at the station.



Independent Advanced starter signal for each departure line outside all points of the station

Interlocking in the station section:

In a complex network where the traffic is heavy, it is important that the signal is taken 'Off' only after ensuring that the track is clear, points are set and secured for the scheduled route on which train is to traverse, interlocked level crossing gates falling in the route of train including overlap are closed and locked in road traffic. This eventually means that a desired sequence of operation of points and signals is required to be ensured before the signal can be taken 'Off'. This desired sequence of operation is achieved through interlocking of these equipment with each other through mechanical, electrical or electronics means. As per General Rule book 2007, clause 30, chapter- I, issued by Indian Railways, the interlocking is defined as "an arrangement of signals, points and other appliances, operated from a panel or lever frame, so interconnected by mechanical locking or electrical locking or both that their operation must take place in proper sequence to ensure safety". The interlocking is defined in Railway Signalling published by B.S.I as number 719/1936 as "an electrical or mechanical means of making the operation of one piece of apparatus is dependent upon the operation of certain predetermined conditions being fulfilled by other apparatus". With the advent of Solid State interlocking this stand modified to add 'electronic' to `electrical or mechanical' in the above definition. The interlocking

can therefore be understood as 'an arrangement through which operation of points and signals in a pre-determined sequence is ensured'.

The basic rules to be observed while designing interlocking which is predetermining sequence of operation of points, locks, closing of level crossings etc., have been given as essentials of interlocking in signal Engineering Manual 1988 part-I paragraph 7.82, as reproduced in following paragraph:

Essentials of interlocking:

Lever frames and other apparatus provided for the operation and control of signals, points, etc., shall be so arranged as to comply with the following essentials (SEM part 1, 1988 clause 7.82):

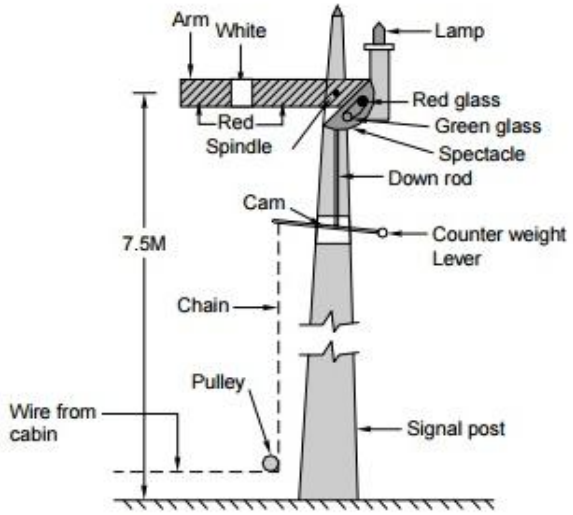
i) It shall not be possible to take "OFF' a running signal, unless all points including isolation are correctly set, all facing points are locked and all interlocked level crossings closed and locked against public road for the line on which the train will travel, including the overlap.
After the signal has been taken 'OFF' it shall not be possible to move any points or lock on the route, including overlap and isolation, nor to release any interlocked gates until the signal is replaced to the 'ON' position.

ii) It shall not be possible to take 'OFF' at the same time, any two fixed signals which can lead to any conflicting movements.

iii) Where feasible, points shall be so interlocked as to avoid any conflicting movement"

It is very important to understand that it is the signal, which is taken 'Off' last, after ensuring essentials of interlocking, be it operated by a lever or taken 'Off' electrically/electronically, only when all points en-route have been set for the route on which train is

intended to move, this should include overlap, all points falling in facing direction of the train are locked including points falling in overlap as if the train was to pass over these points as well, all level crossing gates which are interlocked with the signals and fall not only within the route but also in the overlap, have been closed to road traffic and locked, while at the same time no two signals should come 'OFF' simultaneously which may conflict route of the train. The signal being the last, it should always be possible to put it back to 'On' in case of emergency, without any hindrance, by lever in lever frame or by push button on panel.



Semaphore Signal

SYSTEM OF WORKING

4

System of Working has been defined in the General Rules as **the system adopted for time being for working of trains in operation of a Railway.** Systems of Working have been devised to ensure the following:

- Safety.
- Higher speeds of trains
- Handling of higher density of traffic.

A prescribed System of Working ensures that suitable space interval is provided between running trains so that there are no collisions although the braking distance of trains may be more than the distance from which an obstruction on the track (another train or vehicle) can be sighted.

4.1 Various Systems of Working on Indian Railways

The following Systems of Working have been authorized on the Indian Railways:

1. Absolute Block System.
2. Automatic Block System.
3. Following Trains System.
4. Pilot Guard System.
5. Train Staff and Ticket System.
6. One Train Only System.

Normally the Absolute Block and Automatic Block Systems are used on the Indian Railways. However, on certain sections, other systems mentioned above may be used under Approved Special Instructions. These systems of working have been described later in the book.

4.2 Absolute Block System.

The trains are worked on the Absolute Block System under following rules-

1. no train shall be allowed to leave a block station unless Line Clear has been received from the block station in advance, and
2. on double lines such Line Clear shall not be given unless the line is clear, not only up to the first stop signal at the block station at which such Line Clear is given, but also for an adequate distance beyond it.
3. on single lines such Line Clear shall not be given unless the line is clear of trains running in the same direction, not only up to the first stop signal at the block station at which such Line Clear is given, but also for an adequate distance beyond it, and is clear of trains running in the direction towards the block station to which such Line Clear is given.
4. Unless otherwise directed by approved special instructions, the adequate distance referred to in clauses (2) & (3) shall not be less than –
    1. 400 meters in case of two-aspect lower quadrant signalling or two-aspect colour light signalling, and
    2. 180 meters in case of multiple-aspect or modified

lower quadrant signalling.

The absolute block system is worked on the concept of lock and blocks system. The essentials of the Lock and Block System are as under:

(a) It shall not be possible to take ‘‘Off’’ last stop signal to permit a train to leave a block station until ‘Line Clear’ has been received from the block station in advance.

(b) The entry of a train into the block section shall cause the last stop signal to be automatically replaced at ‘On’.

(c) Line Clear shall not be given by the block station in advance until the preceding train has passed over the section clearing track circuit or its equivalent and until stop signal / signals in rear of the train has / have been replaced to ‘On’ position.

4.3 Automatic Block System.

The condition of working in automatic block system are as under:

(1) Where trains on a double line are worked on the Automatic Block System –

(a) the line shall be provided with continuous track circuiting or axle counters,

(b) the line between two adjacent block stations may, when required, be divided into a series of automatic block signalling sections each of which is the portion of the running line between two consecutive stop signals, and the entry into each of which is governed by a stop signal, and

(c) the track circuits or axle counters shall so control the stop signal governing the entry into an automatic block signalling section that –

(i) the signal shall not assume an ‘‘Off’’ aspect unless the line is clear not only up to the next stop signal in advance but also for an adequate distance

beyond it, and

(ii) the signal is automatically placed to 'On' as soon as it is passed by the train.

(2) Unless otherwise directed by approved special instructions, the adequate distance referred to in sub-clause (i) of clause c of sub-rule (1) shall not be less than 120 meters.

4.4 Following Trains System.

In this system, trains are worked between two stations by dispatching them one after the other (all in the same direction) at specific intervals (generally at least 15 minutes). The trains are run at specific speeds (less than 25km/h). This ensures that there should only be one train in every 5 km stretch in the section between the stations. The maximum number of trains simultaneously present in the section is restricted to 4.

Trains are dispatched only after the station masters of both stations have been in communication and have agreed upon the number and timing of the trains. The driver of a train being dispatched in this system must carry written authorization (*Authority to Proceed, Following Trains System*) specifying the destination, speed, and details of preceding and following trains on the section.

This system was introduced in many areas as an emergency measure in 1941 to cater to the urgent wartime needs of the railways in India. It is still used in some areas when there is a requirement for large unidirectional movements of many freight trains (also known as the *Corridor System*).

When the following Trains System is adopted, the following conditions shall be observed namely:

1. no train shall start until the Driver has been given a written authority to proceed in the form prescribed for the purpose and a written acknowledgement thereof has been obtained from him, the train being stopped for the purpose if not booked to stop,

2. the authority to proceed shall state the station at which the train is next to stop, the speed at which it is to run and the actual time of departure of the preceding train.
3. the Driver and Guard of each preceding train have been informed of the fact that a train will follow, and of the probable period which will elapse before the following train shall start.
4. a train shall not follow another from a station unless the minimum interval of 15 minutes has elapsed since the departure of the previous train.
5. all the trains following the first train shall be timed to run at the same speed which will not exceed 25 kilometers an hour.
6. the actual time of the departure of each train shall at once be intimated to the block stations in advance and the actual time of arrival of each train shall at once be intimated to the block station in rear.
7. the number of following trains running at the same time between any two block stations shall not be more than one for each 5 kilometers of station interval and the total number of trains in the block section shall not exceed four.

4.5 Pilot Guard System

Where trains are worked on the Pilot Guard System.

a. a railway servant (hereinafter called a Pilot Guard) shall be specially deputed to pilot trains; and
b. no train shall leave a station except under the personal authority of the Pilot Guard.

Following Conditions to be Observed as under:

1. Trains shall not follow one another in the same direction between stations, unless
2. the Loco Pilot has been properly warned of the time of departure of the preceding train and of the place at which it will next stop.

3. all the trains are timed to run at the same speed, and such speed shall not exceed 25 kilometers an hour except under special instructions; and
4. an interval of fifteen minutes has elapsed since the departure of the preceding train.
5. The Pilot Guard shall be distinguished by a red dress or badge.
6. No train shall be started from a station unless the Loco Pilot sees that it is accompanied by, or that the authority to proceed is given personally by the Pilot Guard wearing the dress or badge.
7. The Pilot Guard shall accompany every train: Provided that when it is necessary to start two or more trains from one end of the section before a train must be started from the other end, the Pilot Guard shall accompany only the last of such trains and shall personally give the authority to proceed for the preceding trains.
8. When accompanying a train, the Pilot Guard shall ride on the footplate of the engine.
9. When the Pilot Guard does not accompany a train, he shall deliver to the Guard (or, if there be no Guard, to the Loco Pilot) a Pilot Guard's ticket on a printed form properly filled up and signed in ink, as the authority to proceed.

    1. Every such ticket shall apply only to the single journey to the station named on it.
    2. If the train oversees a Guard, he shall, before the train is started, deliver the ticket to the Loco Pilot.
    3. Immediately on the arrival of the train, the Loco Pilot shall deliver the ticket to the Station Master who shall at once cancel it.

4.6 The Train Staff and Ticket System

Where trains are worked between two stations on the Train-Staff and Ticket System-

1. a single Train-staff shall be kept at one of such stations.
2. no train shall start from either or such stations, to the other unless the said train-staff is at the station from which the train starts and has either been handed to or shown to the Driver by the Station Master when giving such permission.

Following conditions will be observed as under:

1. Trains shall not follow one another in the same direction between Train-staff stations unless
2. The Driver has been properly warned of the time of departure of the preceding train and of the place at which it will next stop.
3. All the trains are timed to run at the same speed, and such speed shall not exceed 25 kilometers an hour.
4. An interval of fifteen minutes has elapsed since the departure of the preceding train.
5. No train shall be started from a station unless the Driver has in his possession to be carried with him on the journey, either the Train-staff or a Train-staff Ticket, for the section of the line over which the train is about to travel.

4.7 The One Train Only System

The one train only system is generally used in branch line, especially new railway lines or short terminal branches in single line. Some of the important working in the One Train Only System is as under:

1. In One Train Only System, only one train shall be on the section on which this system is in force, at one and the same time.
2. A Driver shall not take his train into the section unless he is in possession of the authority to proceed as prescribed by special instructions.

3. If the train becomes disabled and requires assistance or if an accident occurs which renders it impossible for the train to proceed, the train shall be protected in accordance with the provisions in GR (Rule 6.03).
4. The Guard of the train shall convey advice of the circumstances under which the train has become disabled and is not able to proceed, to the Station Master of the station from which assistance can best be obtained, and if it is necessary for such Guard to proceed to such station, he shall instruct the Driver in writing to keep the train stationary until his return and obtain his written acknowledgment.
5. The Guard of the disabled train shall be responsible for the safe and proper working of the line until the disabled train has been moved and any other engine sent to the assistance of the disabled train has been returned to the base station.



ABSOLUTE BLOCK SYSTEM AND ITS WORKING

5

General Rules laid down that the Absolute block system alone shall be used on every railway, except on any railway or portion of a railway, on which the Railway Board may expressly sanction the use of any other system. According to this rule, the Railway Board has given the general permission for the use of Absolute block system. With this only, importance of this system can be realized. It is adopted universally as it is the most suitable, safe, and practicable system.

The word block has got many meanings in railway terminology, "Yard is blocked" means yard is congested. "Section is blocked due to accident", means section is obstructed due to accident. "Section is blocked for 8 up mail" means permission to approach is received for 8 up mails. But when we speak about Absolute block system, we do not take any of these meanings. We always talk of Absolute block to convey the sense of "Complete space interval" or "Absolute space interval"; i.e., not only up to first stop

signal but also an adequate distance beyond it, between any two running trains or a running train and a vehicle.

It demands this entire space interval of a section, between certain stop signals of the block stations on to which no running train may enter unless permission to approach is obtained from the station in advance. It is this margin of space, protected by a stop signal at danger which is essence of Absolute block system.

The trains are worked on the Absolute Block System as under:

1. No train shall be allowed to leave a block station unless Line Clear has been received from the block station in advance.
2. on double lines such Line Clear shall not be given unless the line is clear, not only up to the first Stop signal at the block station at which such Line Clear is given but also for an adequate distance beyond it.
3. on single lines such Line Clear shall not be given unless the line is clear of trains running in the same direction, not only up to the first Stop signal at the block station at which such Line Clear is given, but also for an adequate distance beyond it, and is clear of trains running in the direction towards the block station to which such Line Clear is given.
4. Unless otherwise directed by approved special instructions, the adequate distance referred to in clauses (2) & (3) shall not be less than-
    a) 400 meters in case of two-aspect lower quadrant signalling or three-aspect colour light signalling/
    b) 180 meters in case of multiple aspect signalling or modified lower quadrant signalling.

5.1 Provision of Lock and Block

With a view to preventing collisions due to human failures, system of Lock and Block has been introduced which ensures that the Station Masters comply with the provisions of the Absolute Block System while working trains. The essentials of Lock and Block arrangements which are ensured through electrical interlocking, are as follows:

1. The Last Stop signal at a Block Station cannot be taken 'Off'' unless Permission to Approach (or Line Clear) has been obtained from the station in advance.
2. The Last Stop signal, which is taken 'Off' for dispatch of a train, automatically goes back to 'On' position as soon as the train passes it.
3. The Last Stop signal cannot be taken 'Off' again unless a fresh Line Clear is obtained.
4. The Block section cannot be closed and fresh Line Clear cannot be obtained on the Block Instruments unless the preceding train clears the Block Section, and the reception signals are put back to 'ON' position.

5.2 Safety factors of Absolute Block system.

1. Block section is taken as prohibited area where no running train may enter unless permission to approach has been received from block station in advance.

2. Block section, as well as stations, are protected by guards in the form of stop signals. No unauthorised movement can take place if guard is alert i.e., if stop signal is at danger.

3. Adequate distance is another safety factor. Even if driver overshoots by mistake, still sufficient space is provided for him to bring his train to stop,

4. If once permission to approach is given by S.M. he absolutely deprives himself of all rights on that block section and is not allowed to use it till that train arrives at the station.

5. Only one train can occupy one block section at one and same time.

6. The purity of the block section is kept up to such an extent, that even if section is to be occupied for a short time, when no train is expected from other side, permission of other S. M., in form of block back or block forward, is first taken, before actually occupying the block section.

Advantages of Absolute Block system.

1. Whole section is split up into further block sections. Each block section holds one train at a time. Hence, so many trains can run in one section.
2. It is practicable and useful on double line, as well as on single line; on lengthy sections, as well as on short sections.
3. It is the most efficient and safe system.
4. Means of communication are essentially to be provided, so S.M.'s of the whole section, know about the where abouts of trains on the section.
5. Fixed signals are servants of Absolute block system which control the movement of trains efficiently.
6. Permission to approach is the first essential which renders greatest safety.
7. It is suitable for all sorts of traffic whether fast or slow, heavy or light.
8. General permission is accorded by Railway Board, so no special permission is required.

Disadvantages of Absolute Block system.

1. It is expensive, as signals and means of communications are to be provided at every station.
2. Only limited number of trains can be run according to the sectional capacity of that section.

Lock and block system and how it fulfils the essentials of Absolute block system?

Lock and block are an arrangement under which the signals are interlocked with block instruments. It is the safest system and employs improved interlocking; It eliminates to the great extent chances of human failure. The following are the minimum essentials of lock and block on double line section, where installed, on Central Railway.

1. It shall not be possible to unlock a last stop signal to permit a train to leave a block station until line clear has been received from the block station in advance.
2. The entry of the train into the block section shall operate a locking treadle to cause the last stop signal to be replaced to on position.
3. Line clear shall not be given by the block station in advance until the whole of the last preceding train has passed over the clearing treadle (where provided) or at least quarter of a mile beyond the first stop signal and until such stop signal or signals in rear of clearing point have been replaced at on position.
4. At class 'A' station, the warner signal arm should be at on before line clear can be given.
5. At class 'B' station, the outer signal arm and the warner slot lever shall be proved at on before line clear can be given.

5.3 Class A Double Line.

1. Whole of the last preceding train must have arrived complete.
2. All signals must have been put back to on behind the said train.
3. The line on which it is intended to receive the incoming train must be clear up to starter.
4. All points must have been correctly set and all facing points correctly locked in the admission of the train on the said line.

The first condition that whole of the last preceding train has arrived completely fulfils first principle that there should be only one train, in one block section at the one and same time."

Signals behind the said train have been put back to on, marks the provision of a stop signal. As lowered signal is not a stop signal. Sleeping watchman is not a watchman. So, to make the guard alert; we must wake him up. Hence it is said that signals should be put back on.

At class "A" station, home is the first stop signal and line should be clear not only up to first stop signal but also an adequate distance beyond it. As starter is always fixed at a distance no less than adequate distance beyond first stop signal i.e., home, so the condition is laid down that line should be clear up to starter.

All points should be set and facing points locked complies with the principle of clearance of block section. As at class "A" station, block section extends up to starter and the points comes with in starter, so those must be correctly set and facing points correctly locked also, as unlocked facing points is considered as an obstruction.

5.4 Class B double line,

1. The whole of the last preceding train must have passed inside the home signal,
2. Home and outer must have been put back to on.
3. Line must be clear up to home.

First condition, whole of the last preceding train must have arrived inside the home, complies with the essential of one train in one block section at one and the same time. Putting of home and outer to on, makes the provision of stop signal.

At a class B station, the outer is first stopping signal. Line should be clear not only up to first stop signal but also an adequate distance beyond it, for giving permission to approach which is demarcated by home. Hence the condition that the line should be clear up to home, fulfils the essential of absolute clearance of block section.

Note-Fourth condition of setting and locking the points is given in class "A" but not in class "B". The reason for the same is that at a class B station, the line should be clear only up to home which is always fixed beyond all connections on the line to which it refers. So there, no points fall within the block section. But at class 'A' station, the line should be clear up to starter. So, points fall in the block section. Until and unless all points are correctly set and facing points are correctly locked, line shall not be considered clear and permission to approach shall not be given. Therefore, at class "A" station the condition for setting and locking the points is laid down.

B. (MAUQ) Double line,

1. The whole of the last preceding train must have passed inside the outermost facing points at that end nearest the approaching train.

2. All signals must have been put back to behind the said train.

3. Line must be clear up to the outermost facing points.

First condition, whole of the last preceding train arrived inside outermost facing points ensures train in one block section at one and same time Second condition the stop signal ON position. The third condition ensures absolute clearance of the block section i.e., not only up to the first stop signal but also an adequate distance

beyond it. At class B (MAUQ) home is the first stop signal and adequate distance beyond it, ends at outermost facing points.

Note- In the first condition, it is laid down that "outermost facing points at that end nearest to approaching train" because outermost facing point on either side, so to specify the same, the rule has mentioned about it.

B class single line equipped with two aspect semaphore signals.

1. Whole of the last preceding train must have passed inside home signal, if any, or must have arrange at the place at which trains usually come to stop.

2. Home, if any, and outer must have been back to ON position.

3. Line must be clear,

(a) up to the shunting limit board or advanced starter, if any, at that end of the station nearest the approaching train.

(b) Up to the home signal, if there is no shunting limit board or advanced starter.

(c) up to the outermost facing points if there is no shunting limit board or advanced starter or home signal.

Note-The doubt may arise that minimum equipment of signals at a B class equipped with two aspect semaphore signals is outer and home, then how can there be any station without home. The reason for this is that G.R. 3.01 makes a provision that where traffic is very light and slow, home may be dispensed with. Only one signal at an adequate distance from outer most facing points may be provided in each direction. Now the first condition ensures one train in one block section at one and the same time.

The second condition is the provision of a stop signal.

4. Third condition complies with the principle of absolute clearance of block section. The first stop signal at B class single line is outer. Adequate distance beyond it, will terminate at shunting limit board or advanced starter, if any; or up to home, if there is no shunting limit board or advanced starter; or in absence of any of these, up to outermost facing points.

B. MAUQ Single line.

1. The whole of the last preceding train must have passed with in the home signal.

2. All signals must have been put back to ON behind the said train.

3. The line must be clear, up to shunting limit board or advanced starter, if any, at that end of the station nearest the approaching train or up to the outer most facing points if there is no shunting limit board or advanced starter.

First condition ensures one train in one block section at the one and same time.

Second condition makes the provision of stop signal.

Third condition implies with absolute clearance of block section. Home is the first stop signal. Adequate distance of minimum 180 meters will terminate at shunting limit board or advanced starter, if any, or in the absence of these signals, up to outermost facing points.

C Class.

1. The whole of the last preceding train must have passed at least a quarter of a mile beyond the home signal and must be continuing its journey.

2. The home and warner must have been put back to on.

Now first condition ensures one train in one block section at one and the same time and also ensures absolute clearance of block section. The reason for the same is that at a 'C' class station, home is first and last stop signal. So, there is no demarcation beyond home, hence the condition of passing a quarter of mile and still continuing its journey is laid down. Second condition makes the provision of a stop signal at on position.

5.5 Conditions for giving train out of section signal.

A' Class Station.

1. The train must have passed the starter or if there is line which is clear up to the starter, the facing points must have been correctly set and locked for the same
2. S. M. must have personally satisfied himself that train has passed with tail lamp or tail board on or has arrived complete and he has received train intact register duly signed by guard.
3. All signals taken off for admission of the train must have been put back to on.

B Class (Two aspect semaphore signals).

1. Train must have passed within home signal.
2. S. M. must have personally satisfied that train has passed complete or has arrived complete with tail lamp or tail board on the last vehicle and is standing clear of fouling marks or he has received train intact register duly signed by guard.
3. All signals must have been put back to on.

B. MAUQ

1. Whole of the train must have passed with in outermost facing points at that end.
2. S.M. must have personally satisfied himself that train has passed complete or train has arrived complete with tail

lamp or tail board on last vehicle and is standing clear of fouling marks or he has received the train intact register duly signed by guard.

3. Signals behind the said train must have been put back to on

C Class.

1. The whole of the train must have passed a quarter of a mile beyond the home and must be continuing its journey and S.M. must have satisfied personally that tail lamp or tail board was there on the last vehicle.
2. Home and warner must have been put back to on behind the said train.

5.6 Temporary Single Line (TSL) working on Double line

Whenever an accident to a train or track or other obstruction takes place on a double line, the traffic may temporarily work under the following systems:

a) By obtaining 'line clear' on electric speaking instruments,
b) By the installation of single line block instruments and SLB demarcating the block section in the wrong direction if the affected line is likely to remain out of use for a substantial period.

1. On receipt of reliable information in writing that one line is clear, SM, in consultation with SCOR and the SM of the station at the other end of the section shall take steps to introduce TSL working.
2. In case of doubt, Track Safe Certificate shall be obtained by the engineering Official not less than the rank of an Inspector.
3. TSL working shall be introduced between the nearest stations provided with cross-over between Up and Down lines.
4. IBS and C' class stations shall be kept closed and the commutators of the related block instruments shall be locked

in 'TOL' position. Caution Indicator shall be hung on the handle of block instruments in case of Daido instruments.

a) SM proposing TSL working shall issue a message, to the SM at the other end of affected section, containing the following information under exchange of Private Numbers.
b) Cause of introduction of TSL working.
c) The line in which the TSL working is proposed.
d) Source of information that the said line is clear.
e) Place of obstruction.
f) Names of intermediate stations if any, which would be out of use.
g) Assurance that the trap points if any have been spiked or clamped and padlocked.
h) Assurance that if the train is running on the right line, the last stop signal shall be kept in the ON position. In case the train is running on the wrong line, all fixed signals shall be kept in the ON position; and
i) The number and timings of the last train which arrived or left the block station issuing the message.

5. After exchanging of the above information, line clear shall be obtained through the means of communication.
6. Authority:
   a) Right line – T / D 602
   b) Wrong line – T / D 602 and T / 511 / Pilot out memo.
7. Three parts of T / D 602 are as under:
   a) Line clear ticket.
   b) Authority to pass signals in ON position; and
   c) Caution Order in which the following are mentioned-

1. Line on which the train is going and place of obstruction,
2. Speed of the first train shall be 25 km/h subject to observance of other speed restrictions in force,
3. Warning to observe neutral section for the train going on wrong line in electrified section and clamping / spiking of trap points if any, and
4. Other speed restrictions in force.

8. Loco Pilot of the first train shall inform all Gatemen and Gang men on the way about the introduction of TSL working specifying the road on which the trains will run.
9. The Loco Pilot of the train proceeding on the wrong line shall switch ON the flasher light and sound frequently short whistles.
10. Second and subsequent trains may run at their booked speed subject to observance of other speed restrictions in force.
11. When a train is stopped between stations on account of accident, failure, obstruction or other exceptional cause and the Loco Pilot finds that it cannot proceed, it shall be protected as per GR 6.03.
12. Trains proceeding on the wrong line shall stop opposite the first stop signal of the right line or at the lass stop signal of the wrong line whichever comes first. SM shall depute a railway servant with a written authority to stop the train on danger hand signal and thereafter pilot the train into the station.
13. Trains proceeding on the right line shall be received by taking 'Off' the approach stop signals.
14. Resumption of normal working:
    a) On receipt of a written certificate from a responsible engineering 'Official that the obstructed track is free and

safe for passage of trains, SM shall issue a message to the other station / stations under exchange of Private Number and in consultation with the Section Controller (SCOR), normal working shall be resumed.

b) Block instruments and all fixed signals including those of IBH which were treated as closed shall be brought into use immediately.

c) An entry shall also be made in the TSR of all stations concerned showing the time of suspension of double line working, introduction of single line working and resumption of normal working.

d) Loco Pilot of the first train entering the section after resumption of normal working shall inform all Gatemen and Gang men on the way about the resumption of normal working.

15. All the records in connection with the TSL working shall be retained at the station and the TI of the section must scrutinize and submit his report to the DRM within 7 days of the resumption of normal working.

All Communication Failure on Double line in absolute block system

In the event of total interruption of communication (TIC) occurring between two stations on a double line section, i.e. when Line Clear cannot be obtained by any one of the following means stated in order of preference viz:

a) Block instruments; Track circuits or Axle counters.

b) Telephones attached to the Block Instruments.

c) Station to station fixed telephones wherever available.

d) Fixed telephone such as Railway auto phones & BSNL / MTNL phones.

e) Control Telephone.
f) VHF sets under special instructions, but not as the sole means of communication on sections where passenger trains run.

The following procedure shall be adopted for train passing.

1. Train shall be stopped, and the Loco Pilot and the Guard of the train shall be advised of the circumstance by the SM on duty.
2. SM shall issue authority to the Loco Pilot of each train which shall include –
    a) Authority to proceed without line clear.
    b) Authority to pass signals in ON position.
    c) Caution Order – 25 km/h when the view ahead is clear and 10 km/h when the view ahead is not clear.
3. In the event of a Loco Pilot approaching or passing any portion of the line where the view ahead is not clear, a railway employee with hand signals must be sent in advance to guide the further movement of the train. A sharp look out ahead should be kept and the engine whistle freely used.
4. The train shall be piloted, by a railway employee equipped with hand signals and detonators, through a tunnel only after ascertaining that it is clear. Before entering a tunnel, the head lights, side, and taillights shall be lit.
5. Trains shall be allowed to enter the block section after a clear interval of 30 minutes between each other.
6. Guard shall keep a sharp look out in the rear and be prepared to exhibit a hand danger signal to prevent the approach of a train from the rear and to protect if necessary.
7. When a train is stopped in the block section, on account of accident, failure, obstruction or other exceptional cause and

the train cannot proceed, it shall be protected by placing three detonators at a distance of 250 - 250 - 10 meters apart from the train on the way out.

8. No train shall be backed. In unavoidable circumstances, it shall be backed only after placing three detonators at a distance of 250 - 250 - 10 meters apart in the rear of the point up to which the train is to be backed.
9. On approaching the station ahead, Loco Pilot shall stop the train outside the first stop signal and sound continuous long whistle.
10. If the signal is not taken 'Off' within 10 minutes and if the detention is likely to exceed 10 minutes, train shall be protected in the rear by placing three detonators at a distance of 250 - 250 -10 meters apart, and Loco Pilot shall send his assistant to the station / cabin to inform the fact that the train is waiting at the signal for its admission into the station.
11. After the train being admitted into the station by taking 'Off' the signals, the Loco Pilot shall make over the authority to the SM.
12. Trains must continue to work on this system until anyone of the means of communications is restored by the competent authority.
13. A record of all trains passed over during the period shall be maintained on the TSRs at both the stations concerned.
14. As soon as anyone of the means of communication has been restored, the SMs must send messages under exchange of Private Numbers and Line clear shall not be obtained or given until both the SMs are satisfied that all trains dispatched from their stations have arrived complete at the other stations. SCOR shall be intimated about this.

15. All the records in connection with the working of trains during the course of TIC shall be inspected by the TI of the section, who shall prepare a report on the working of trains and shall forward the same along with his report to the DRM within 7 days of communication.

5.7 All Communication Failure on Single line

1. In the event of total interruption of communication (TIC) occurring between two stations on a single line section, i.e. when Line Clear cannot be obtained by any one of the following means stated in order of preference viz:
   a) Block instruments; Track circuits or Axle counters.
   b) Telephones attached to the Block Instruments.
   c) Station to station fixed telephones wherever available.
   d) Fixed telephone such as Railway auto phones & BSNL / MTNL phones.
   e) Control Telephone.
   f) VHF sets under special instructions, but not as the sole means of communication on sections where passenger trains run.

   The following procedure shall be adopted for train passing.
2. The SM who has a train to dispatch through the affected block section shall open communications by establishing contact with the SM of the block station at the other end by sending an engine or self-propelled vehicle or any other vehicle as under in the order of preference viz:
   i. Light engine.
   ii. Train engine.
   iii. Motor trolly / Tower wagon accompanied by a Guard or SM.

iv. Trolly / Cycle Trolly / Moped Trolly accompanied by a Guard or SM.
v. Diesel car / Rail motor car / EMU rake after ensuring that all passengers have detrained.

3. The SM on duty shall advise the circumstances and the purpose of the staff being sent with the above engine / vehicle into the affected block section to open the communication. He must also satisfy himself that the staff thoroughly understand the rules of working of trains during TIC on single line and obtain their signature on the authority in token of acknowledgement.
4. Authority is issued to the Loco Pilot of the vehicle going to open the communication after explaining the situation. It has the following five parts:
    a) Authority to proceed without line clear,
    b) Authority to pass LSS at ON,
    c) Caution order – 15 /10 /walking pace,
    d) Line clear enquiry message,
    e) Conditional line clear message.
5. Duties of Loco Pilot and Guard:
    a) Loco Pilot shall go through the authority and ensures the correctness of the entries,
    b) Loco Pilot shall proceed putting on the flasher light,
    c) Loco Pilot shall observe the speed restriction in force,
    d) Loco Pilot shall sound frequently short whistles,
    e) Loco Pilot shall stop at an adequate distance if any vehicle is seen coming from the opposite direction and proceed after consultation with the Loco Pilot of the vehicle regarding the importance of the train, distance covered, gradients, catch siding etc.

f) Loco Pilot shall stop at the FSS and sound continuous long whistle to attract the attention of SM.

6. On hearing the whistle, SM gets the points set and facing points locked and receives the train by taking 'Off' the signals and collect authority and make proper entry in TSR.
7. The following authorities are issued to the Loco Pilot of the returning vehicle –
   a) Authority based on the conditional line clear message of concerned authority,
   b) authority to pass the signals at ON,
   c) authority to observe the speed restrictions in force,
   d) authority reply to line clear enquiry message,
   e) T/E 602 – if required to ask line clear.
8. Authority the Loco Pilot of the vehicle proceed at normal speed, and SM will receive the train by taking 'Off' signals and obtain T/F 602 and T/E 602.
9. SM issues the following authorities to the waiting train before dispatching-
   a) Authority based on T/F 602.
   b) Authority to pass signals at ON.
   c) Authority to observe speed restrictions in force.
   d) Authority if T/E 602 is received.
   e) Authority if required to ask line clear.

Note: When the number of trains is the same at both stations, SM shall issue T/E 602 and T/F 602 to Loco Pilot / Guard of each train.

10. When more than one train is waiting for line clear, T/E 602 is filled with details of all the trains.
11. If the other SM is in a position to receive all the trains, he shall give separate private number to all the trains and fill the details in T/F 602.

12. Under such circumstances, trains are dispatched at an interval of 30 minutes issuing the following authorities –
    a) T/G 602 or T/H 602,
    b) T/369(3b),
    c) T/409 – speed 25 /10 kmph.
13. On availability of any one of the means of communication, both SMs ensure that the section is clear and exchange private numbers and fill T/I 602.
14. Details of the movement are entered in TSR which are examined by TI and a report will be sent to DRM within seven days.



AUTOMATIC BLOCK SYSTEM
WORKING AND RUNNING OF TRAIN DURING ABNORMAL CONDOTION

6

The Automatic Block System is followed mostly on the suburban sections and very heavy density routes where many trains must follow in quick succession.

Following are the essentials of the Automatic Block System on double line sections:

1. The line is provided with continuous track circuiting or axle counters.
2. The line between two adjacent block sections may be divided into a series of automatic block signalling sections each of which is the portion of the running line between two consequent stop signals and the entry into each of which is governed by a stop signal.
3. The track circuits or axle counters shall so control the stop signal governing the entry into the automatic block signalling section that-

a) the signal shall not assume an OFF" aspect unless the line is clear not only up to the next stop signal in advance but also for an adequate distance beyond it.
b) the signal is automatically placed to "ON' position as soon as it is passed by the train.

Unless otherwise directed by approved special instructions the adequate distance referred to above shall not be less than 120 meters.

6.1 Automatic Signals

As indicated above in the essentials of Automatic Block System, the aspects of an Automatic Stop Signal are controlled by the movement of trains over the block signalling sections ahead.

6.2 Kinds of Fixed Stop Signal in Automatic Block Territories

1. Stop signals in Automatic Block territory are colour light signals and may be of the following types:
   a) an Automatic Stop Signal which is not dependent upon manual operation but is controlled automatically by the passage of a train into, through and out of the automatic block signalling section.
2. A Semi-Automatic Signal which is capable of being operated either as an Automatic Stop Signal or as a manual Stop signal, as required
   a) When a Semi-Automatic Stop signal works as an Automatic Stop Signal, it assumes ON and OFF aspects automatically according to the condition of the automatic block signalling sections ahead.
   b) When a Semi-Automatic Stop signal works as a Manual Stop Signal, it assumes ON aspect automatically on the occupation of the automatic block signalling section ahead, but assumes 'off aspect when operated manually, provided the relevant automatic block signalling sections ahead are clear.

c) When a Semi-Automatic Stop Signal works as an Automatic Stop signal, the 'A' marker provided under the signals is illuminated. When the 'A' marker is extinguished, the signal shall be deemed to work as a manual Stop signal; and

3. A Manual Stop signal operated manually and which cannot work as an Automatic or a Semi-Automatic Stop signal.

Colour light signals in Automatic Block territory may be three aspect or four-aspect.

Duties of Driver and Guard when Automatic Stop signal on double line is to be passed at ON position:

1. When a Driver finds an Automatic Stop signal with an 'A' marker at "ON', he shall bring his train to a stop in the rear of the signal. After bringing his train to a stop in the rear of the signal, the driver shall wait there for one minute by day and two minutes by night. If after waiting for this period, the signal continues to remain at "ON', he shall give the prescribed code of whistle and exchange signals with the Guard and then proceed ahead, as far as the line is clear, towards the next stop signal in advance exercising great caution to stop short of any obstruction.
2. The Guard shall show a Stop hand signal towards the rear when the train has been so stopped at an Automatic Stop signal, except as provided for in sub-para (4) below.
3. Where owing to the curvature of the line, fog rain or dust storm, engine working the train pushing it, or other causes, the line ahead cannot be seen clearly, the driver shall proceed at a slow speed, which shall under no circumstances exceed 8 kilometers an hour. Under these circumstances, the Driver, when not accompanied by a Fireman or an Assistant Driver, and if he considers necessary, may seek the assistance of the Guard by giving the prescribed code of whistle.

4. When so sent for by the Driver, the Guard shall accompany him on the engine cab, to assist the Driver in keeping a sharp look-out.
5. When an Automatic Stop signal has been passed at "On' the Driver shall proceed with great caution until the next Stop signal is reached, even if the signal is off, the Driver shall continue to lookout for any possible obstruction short of the same. He shall proceed cautiously up to that signal and shall act upon its indication only after he has reached it.

Rules Applicable to Double Line

Rules Applicable to Double Line Automatic Block System Working

1. Where trains on a double line are worked on the Automatic Block System.
   a) The line shall be provided with continuous track circuiting or axle counters.
   b) The line between two adjacent block stations may, when required, be divided into a series of automatic block signalling sections each of which is the portion of the running line between two consecutive Stop signals, and the entry into each of which is governed by a Stop signal.
   c) The track circuits or axle counters shall so control the Stop signal governing the entry into an automatic block signalling section that:
      i. the signal shall not assume an OFF aspect unless the line is clear not only upto the next Stop signal in advance but also for an adequate distance beyond it.
      ii. the signal is automatically placed to ON as soon as it is passed by the train.
2. Unless otherwise directed by approved special instructions, the adequate distance referred to in sub-clause (i) of clause (c) of sub rule (1) above shall not be less than 120 metres.

3. (a) under special instructions, one of the automatic stops signals between

two stations in the automatic block signalling territory in each

direction may be made as modified semi-automatic stop signal.

(b) the mid-section modified semi-automatic stop signal so provided shall be interlocked with the signals of the station ahead through track circuits or axle counters or both and shall be controlled by the Station Master of the station ahead, the relevant indications whether the signal is in normal automatic mode or modified semi-automatic mode shall be available to the Station Masters at both the ends.

(c) Advanced starter signal of the station in rear shall be interlocked with the mid-section modified semi-automatic stop signal in such a way that when working with 'A' sign extinguished, the Advanced starter shall assume OFF aspect or be taken OFF only when the line is clear upto an adequate distance beyond the mid-section modified semi-automatic stop signal; similarly the mid-section modified semi-automatic stop signal shall assume OFF aspect automatically or be taken OFF only when the line is clear upto an adequate distance beyond the Home signal of the station ahead.

(d)during abnormal conditions like fog, bad weather impairing visibility, the mid-section modified semiautomatic stop signal may be worked by extinguishing 'A' marker in the manner prescribed under special instructions and this action shall also ensure that the 'A' marker of the Advanced starter signal of the station in rear and Home signal of the station in advance shall also be extinguished.

(e)the adequate distance mentioned under clause (c) shall not be less than as prescribed under sub-rule (2).

(f)during normal conditions, mid-section modified semiautomatic stop signal shall work as normal automatic stop signal.

4. (a) when the Loco Pilot finds mid-section modified semiautomatic stop signal with 'A' marker extinguished in ON position, he shall stop his train in the rear of the signal and inform this fact to the Station Master of the station ahead on approved means of communication as prescribed under special instructions.

(b) the Station Master of the station ahead may authorize the Loco Pilot to pass the mid-section modified semiautomatic stop signal working with 'A' marker extinguished in ON position through approved means of communication after ensuring conditions and procedure prescribed under special instructions.

(c) in case the Loco Pilot is unable to contact the Station Master of station ahead, he shall pass the signal at ON after waiting for five minutes at the signal and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding ten kilometres an hour upto the next Signal and act as per aspect of this signal; and

(d) the Loco Pilot shall report the failure of mid-section modified semi-automatic stop signal to the Station Master of the station ahead.

Duties of Loco Pilot and Guard When an Automatic Stop Signal on Double Line is to be passed at ON.

(1) When a Loco Pilot finds an Automatic Stop signal with an 'A' marker at ON, he shall bring his train to a stop in rear of the signal. After bringing his train to a stop in the rear of the signal, the Loco Pilot shall wait there for one minute by day

and two minutes by night. If after waiting for this period, the signal continues to remain at ON, he shall give the prescribed code of whistle and exchange signals with the Guard and then proceed ahead, as far as the line is clear, towards the next Stop signal in advance exercising great caution to stop short of any obstruction.

(2) The Guard shall show a Stop hand signal towards the rear when the train has been so stopped at an Automatic Stop signal, except as provided for in sub-rule (4)

(3) Where owing to the curvature of the line, fog, rain or dust storm, engine working the train pushing it, or other causes, the line ahead cannot be seen clearly, the Loco Pilot shall proceed at a terribly slow speed, which shall under no circumstances exceed 10 kilometers an hour. Under these circumstances, the Loco Pilot, when not accompanied by an Assistant Loco Pilot, and if he considers necessary, may seek the assistance of the Guard by giving the prescribed code of whistle.

(4) When so sent for the Loco Pilot, the Guard shall accompany him on the engine cab, before he moves forward, to assist the Loco Pilot in keeping a sharp lookout.

(5) When an Automatic Stop signal has been passed at ON, the Loco Pilot shall proceed with great caution until the next Stop signal is reached. Even if this signal is OFF, the Loco Pilot shall continue to look out that signal for any possible obstruction short of the same. He shall proceed cautiously up to that signal and shall act upon its indication only after he has reached it.

Rules Applicable to Single Line

Essentials of The Automatic Block System on Single Line.

1. Where trains on a single line are worked on the Automatic Block System.

a) The line shall be provided with continuous track circuiting or axle counters.
b) The direction of traffic shall be established only after Line Clear has been obtained from the block station in advance.
c) A train shall be started from one block station to another only after the direction of traffic has been established.
d) It shall not be possible to obtain Line Clear unless the line is clear, at the block station from which Line Clear is obtained, not only up to the first Stop signal but also for an adequate distance beyond it.
e) The line between two adjacent block stations may, where required, be divided into two or more automatic block signalling sections by provision of Stop signals.
f) After the direction of traffic has been established, movement of trains into, through and out of each automatic block signalling section shall be controlled by the concerned Automatic Stop signal and the said Automatic Stop signal shall not assume OFF position unless the line is clear up to the next Automatic Stop signal: Provided further that where the next Stop signal is a Manual Stop signal, the line is clear for an adequate distance beyond it, and
g) All Stop signals against the direction of traffic shall be at ON.

2. Unless otherwise directed by approved by special instructions, the adequate distance referred to in clauses (d) and (f) of subrule (1) shall not be less than 180 meters.
   (a) under special instructions, one of the automatic stop signals between two stations in the automatic block signalling territory in each direction may be made as modified semi-automatic stop signal.
   (b) the mid-section modified semi-automatic stop signal so provided shall be interlocked with the signals of the station ahead through track circuits or axle counters or both and shall

be controlled by the Station Master of the station ahead, the relevant indications whether the signal is in normal automatic mode or modified semi-automatic mode shall be available to the Station Masters at both the ends.

(c) Advanced starter signal of the station in rear shall be interlocked with the mid-section modified semi-automatic stop signal in such a way that when working with 'A' sign extinguished, the Advanced starter shall assume OFF aspect or be taken OFF only when the line is clear up to an adequate distance beyond the mid-section modified semi-automatic stop signal; similarly the mid-section modified semi-automatic stop signal shall assume OFF aspect automatically or be taken OFF only when the line is clear upto an adequate distance beyond the Home signal of the station ahead.

(d) during abnormal conditions like fog, bad weather impairing visibility, the mid-section modified semi-automatic stop signal may be worked by extinguishing 'A' marker in the manner prescribed under special instructions and this action shall also ensure that the 'A' marker of the Advanced starter signal of the station in rear and Home signal of the station in advance shall also be extinguished.

(e) the adequate distance mentioned under clause (c) shall not be less than as prescribed under sub-rule (2).

(f) during normal conditions, mid-section modified semi-automatic stop signal shall work as normal automatic stop signal.

3. (a) when the Loco Pilot finds mid-section modified semi-automatic stop signal with 'A' marker extinguished in ON position, he shall stop his train in the rear of the signal and inform this fact to the Station Master of the station ahead on approved means of communication as prescribed under special instructions.

(b) the Station Master of the station ahead may authorize the Loco Pilot to pass the mid-section modified semi-automatic

stop signal working with 'A' marker extinguished in ON position through approved means of communication after ensuring conditions and procedure prescribed under special instructions.

(c) in case the Loco Pilot is unable to contact the Station Master of station ahead, he shall pass the signal at ON after waiting for five minutes at the signal and proceed cautiously and be prepared to stop short of any obstruction, at a speed not exceeding ten kilometers an hour up-to the next Signal and act asper aspect of this signal; and

(d) the Loco Pilot shall report the failure of mid-section modified semi-automatic stop signal to the Station Master of the station ahead.

Abnormal Working in Automatic Section

A. Working of trains during prolonged failure of signals when means of communications are available (please refer local Subsidiary Rules)

1. In the event of prolonged failure of all signals the 'Officials concerned of the Signalling Department shall take immediate steps to inform all concerned.
2. Before any train is allowed to enter the affected section, it shall be brought to a stand and the Loco Pilot, Guard, Controller, and the Station Master concerned ahead of the affected section shall be informed.
3. The Station Master shall obtain 'Line Clear' for the train by one of the following means of communications, viz.
    1. Station to station fixed telephones wherever available.
    2. Fixed telephone such as Railway auto phones & BSNL / MTNL phones.
    3. Control telephone.
    4. VHF is set under special instructions, but not as the sole means of communication on sections where passenger trains run.

4. The Station Master on duty at the station in advance shall not give such 'Line Clear' unless –
    1. The whole of the last preceding train has arrived,
    2. The line on which it is intended to receive the incoming train is clear at least 180 meters beyond the Platform Starter or the place at which the trains usually come to a stand, and
    3. All points have been correctly set and all facing points locked in the admission of the train on the said line.
5. Before handing over the 'Authority to Proceed' all the points over which the train will pass, shall be correctly set and facing points locked.
6. Whenever any power operated points must be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are provided.
7. T/D 912 (authority to proceed on automatic block signalling system during prolonged failure of signals)and T/409 (caution order) are issued to the Loco Pilot who shall proceed with utmost caution and must not run at a speed exceeding 25 km/h under any circumstances, subject to other speed restrictions in force. He shall continue to look out for any obstruction until he reaches the station ahead.
8. Loco Pilot of all subsequent trains shall also proceed with great caution, subject to other speed restrictions in force and must continue to look out for any possible obstruction.
9. When approaching the next station, the Loco Pilot shall bring his train to a stand outside the first Stop signal and sound one continuous long whistle.
10. The Station Master shall send a man in uniform to pilot the train from this signal, who shall obey hand signals, if any, relayed from the station platform.

11. Clearance of the section by each train shall be intimated to the station in rear under exchange of Private Numbers.
12. Train Signal Register shall be brought into use and all entries regarding train working recorded their in. The Controller shall be kept advised of all train movements taking place in the affected section, if possible.
13. As soon as signals are put right by competent authority, normal work may be resumed, after exchanging messages with Private Numbers by the Station Masters concerned, assuring that the section is clear. The controller's permission, if possible, should be obtained before resumption of normal working.
14. All the records in connection with train working on this system shall be retained at the station and the Transportation Inspector of the section must scrutinize them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working.

B. Working of trains during failure of all signals when no means of communication are available (Please refer local Subsidiary Rules)

In the event of failure of all signals and when trains cannot be worked by any of the following means, viz.,

1. Station to station fixed telephones wherever available.
2. Fixed telephone such as Railway auto phones & BSNL / MTNL phones.
3. Control telephone.
4. VHF is set under special instructions, but not as the sole means of communication on sections where passenger trains run.

The following procedure shall be adopted for train passing:

1. The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions.
2. All points over which the trains will pass shall be correctly set and facing points locked.
3. Whenever any power operated points must be operated for diverting trains, these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are available.
4. Before any train is allowed to leave the station the Loco Pilot/Motorman and the Guard of the train shall be advised of the circumstances by the Station Master.
5. The Station Master shall give the Loco Pilot/Motorman of each train T/B 912(authority to proceed without line clear in automatic block signal territory) which shall consist of three parts:
    a) An Authority to Proceed without line clear.
    b) A Caution Order restricting the speed to 25 km/h over the straight with clear view and to 10 km/h when approaching or passing any portion of line where the view ahead is not clear due to curve, obstruction, rain, fog or any other cause subject to the observance of other speed restriction imposed and speed over facing points being restricted to 15 km/h.
    c) An authority to pass the Automatic signals intervening the two nominated stations at ON, the Semi-Automatic signals and manually operated signals on being signalled past by a Pointsman or any other railway servant in uniform deputed for the purpose and the Gate signals cautiously up to the level crossing where he must ascertain that the gates are locked and the hand signals are displayed by the Gateman before he proceeds further.

6. No train shall be allowed to enter an affected section until there is a clear interval of 15 minutes between the train about to leave and the train which has immediately proceeded unless a shorter interval has been prescribed under special instructions.
7. Before entering a section where there are tunnels, the Loco Pilot shall light the buffer lamps and the electric headlights. A tunnel shall be entered only after it has been ascertained that it is clear. If there is any doubt on this point, the train shall be piloted by a Assistant Loco Pilot or Guard equipped with hand signal and detonators.
8. The Guard shall keep a sharp lookout in the rear and be prepared to exhibit a danger signal to prevent the approach of a train from the rear and to protect it, if the detention is likely to exceed 5 minutes.
9. When approaching the next station, the Loco Pilot shall bring his train to a stand outside the first Stop signal and sound one continuous long whistle.
10. The Station Master after satisfying himself that all points have been correctly set and facing points locked, shall arrange for a man in uniform to pilot the train from the signal.
11. The Loco Pilots of all trains shall make over the Authority to the Station Master of the nominated station at the end of the section.
12. A record of all trains that passed while total interruption of communications shall be maintained in the Train Signal Registers.
13. Trains must continue to work on this system until either the signals are put right or any one of the means of communications is restored by the competent authority.
14. As soon as the signals are put right, normal working of trains shall be resumed, but where signals continue to remain

inoperative and any of the means of communications is restored, trains will be worked as per instruction laid down in G&SR chapter 9.

16. All the records in connection with train working on this system shall be retained at the station and the Transportation Inspector of the section must scrutinize them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working.

C. Temporary Single Line working in Automatic Block System:

In the event of obstruction of one line on the double line section and the communications are available, the following procedure shall be adopted –

1. When it is desired to introduce temporary single line working on double line on electric communication instruments, the Station Master at one end of the affected section shall, on receipt of reliable information in writing that one line is clear, take steps to introduce temporary single line working on that line in consultation with the Section Controller and the Station Master of the station at the other end of the section.
2. If there is reason to suspect that the line over which temporary single line working is to be introduced is also fouled or damaged, temporary single line working shall not be introduced until a responsible engineering 'Official not below the rank of an Inspector has inspected that section and certified that the road is safe for the passage of trains.
3. The movement of trains on the affected section shall be controlled by such stations and on such lines as are prescribed by special instructions.
4. After ascertaining that one of the lines is clear for the passage of traffic, the Station Master proposing single line working shall issue a message under exchange of Private Numbers, containing the following information, to the Station Master at the other end of the affected section:

1. Cause of introduction of single line working,
2. Line on which single line working is proposed.
3. Source of information that the said line is clear,
4. Place of obstruction,
5. Restriction of speed, if any, on the line,
6. Number and timings of the last train which arrived/left the station nominated by the Divisional Railway Manager under clause 3 above, and
7. An enquiry about speed restriction in the opposite direction.

5. On receipt of acknowledgment and reply to the enquiry regarding speed restriction in the opposite direction, from the Station Master at the other end confirmed by a Private Number, single line working may be introduced.
6. Line clear shall be obtained on Station-to-station fixed telephones wherever available or Fixed telephone such as Railway auto phones & BSNL / MTNL phones or Control telephone or VHF sets under special instructions, but not as the sole means of communication on sections where passenger trains run, as the case may be, and trains run on the procedure set out above.
7. Line Clear shall not be given unless the line on which the train is to be received is clear at least 180 meters beyond the first Stop signal pertaining to the correct line or the last Stop signal pertaining to the wrong line whichever is earlier.
8. For each first train running in the wrong direction, line clear shall neither be asked for nor given unless the two Station Masters have assured under exchange of Private Numbers that all the trains running in the right direction have already arrived complete at the station in advance.
9. Except for each first train running in the right direction for which the procedure laid down for the trains running in the wrong direction shall be followed, subsequent trains running in the right direction may be allowed to follow each other on Automatic Signal indications, provided the station in rear has intimated the station in advance of the fact that he is permitting particular train/ trains to

follow and has ascertained the latter's readiness to receive it/them. Private Numbers shall be exchanged for this transaction.

10. Train Signal Register shall be introduced at the stations in the affected section.
11. All the points over which the train will pass shall be correctly set and facing points locked before the movement of any train is authorized over them.
12. Whenever any power operated points must be operated for diverting trains these may be released and operated locally under the written instructions of the Station Master on duty by the Signal Maintainer at stations where Signal Maintainers are available.
13. Loco Pilots of all trains, except the first train, running in the right direction must be given T/A 912 (authority to pass automatic signal at ON) to pass the last Stop signal which shall be kept at 'red'. The Loco Pilots of trains running in the wrong direction should be given to the authorities before entering the affected section.
14. The Caution Order authorities shall include
    1. The line on which the train or light engine is to run,
    2. The kilometers between which the obstruction exists,
    3. Any restriction of speed, and
    4. the instructions that Automatic signals in the wrong direction should be considered as out of use even though they may be showing 'Proceed' or 'Caution' aspect.
15. Loco Pilots of trains running in the wrong direction are instructed to pass the intervening non-governing (i.e. relating to the opposite direction) Semi-Automatic and Manually operated signals on being hand signalled past by a Pointsman or any other railway servant in uniform deputed for the purpose and the gate signals cautiously up to the level crossings where he must ascertain that the gates are locked and hand signals are displayed by the Gateman before he proceeds further. He must also ascertain that the points of the outlying sidings are correctly set and locked before passing over them.
16. Loco Pilot of the first train introducing temporary single line working in the wrong direction to stop and inform all Gatemen and

Gangman on the way about the introduction of temporary single line working. The road on which the trains shall run is also to be specified.

17. The speed of all trains running in the wrong direction shall not exceed 25 km/h.
18. When approaching the next station Loco Pilot of the train running in the wrong direction shall bring his train to a stand opposite the first Stop signal pertaining to the correct line or the last Stop signal pertaining to the wrong line on which he is running, whichever he comes across first, and sound one continuous long whistle.
19. The Station Master, after satisfying himself that all points have been correctly set and facing points locked, shall arrange for a man in uniform to pilot the train from this signal, who shall obey hand signals, if any, relayed from the station platform. Manual/Semi-Automatic signals, if any, shall, however, be passed on to a written authority on the prescribed form to be issued by the Station Master.
20. Resumption of normal working
    1. On receipt of written certificate from a responsible engineering official that the obstructed track is free for passage of trains, the Station Master shall issue a message to other station or stations under exchange of Private Numbers and decide, in consultation with Section Controller, the train after the passage of which the normal working must be introduced.
    2. An entry shall also be made in the Train Signal Registers of all stations concerned showing the time double line working was suspended, time single line working was introduced, and the time normal working was resumed.
21. All the records in connection with the temporary single line working shall be retained at the station and the Transportation Inspector of the section must scrutinize them and submit his report to the Divisional Railway Manager within seven days of the resumption of normal working.

CONTROL
OFFICE WORKING
(CONTROL ORGANIZTION)

7

The Control Organization of Indian Railways is the nerve center of train operations. It controls the asset management of the Railways, in a dynamic situation, round the clock incessantly moving trains on its entire network.

It has come a long way from being an exclusively telephone-based system emerging in the form of an Information Technology enabled organization.

This basic structure of Operating Control on Indian Railways exists at the Divisional Level, which has also been extended to Area Control levels. In addition, the Central Control Office is situated in the headquarters office and one on the Railway Board.

The area spread of a division is divided into control sections, each section having a given number of stations.

The two-way telephone system, also called an omnibus circuit, permits all stations to have direct communication with the Section Controller, who is responsible for train regulation in his area. The section Controller can speak to all stations at the same

time or to one station selectively, using individual numbers/buttons. Movement of trains is plotted on a time distance graph to record their actual progress, these records, called control charts, can be analyzed later.

To guide and assist the section controller, there are shift Deputy Controllers.

All technical disciplines involved in train movement have a representative in the Control office to provide the required support from his department. These would include-

1. Traffic Controller
2. Power Controller
3. C&W Control
4. Commercial Control
5. Traction Power Controller
6. Engineering Control
7. Signaling and Tele-Communication Controller
8. Security Controller

The entire organization works round the clock, all days of the year without any interruption to monitor actual movement of trains on the entire rail network.

The detailed organization of the control selected, and duties assigned to employees depends on the demands of the transport task appropriate to each grade of employee or to diversity in the transport task. The Chief Controller is the head of Divisional Control Organization.

7.1 Basic Functions of Control:

1. Traffic Control

Traffic Control is the general and over-riding control for supervision of the movement of goods and coaching traffic on the section. The main functions of Traffic Control are:

1. Continuous supervision of the movement of all traffic in the controlled area with a view to

achieving the maximum possible operating efficiency.

2. Analysis of detentions to trains
3. Planning, ordering, and running of goods trains to the best possible paths.
4. Maintaining the fluidity of marshalling yards/freight terminals.
5. Taking remedial action in the event of yard/terminal congestion.
6. Elimination of avoidable detentions to goods stock at loading and unloading points and at transshipment stations.
7. Allotment and distribution of goods stock to stations.
8. Supply of information to adjoining controls, terminals, and engine changing stations regarding the movements of trains to enable adequate timely arrangements for their reception and onward dispatch.
9. Arranging engineering and other departments blocks with minimum detention to traffic.
10. Running of material trains and other track machines, tower wagons etc.
11. Arranging relief for engine crews and Guards.
12. Ensuring maximum utilization of locomotives.
13. Issuing instructions for train working in case of equipment failures and whenever abnormal methods or working have to be resorted to.
14. Speedy arrangements for relief rescue and restoration in the event of accident.
15. To assist in the realistic planning of timetables and punctual running of passenger trains in

coordination with various departments, other divisions and other railways.

16. To keep a watch over damaged stock at roadside stations, yards and sick lines and to ensure that they are promptly attended to
17. To rectify immediately the irregularities on the part of line staff and provide them with necessary guidance.
18. To provide operations management information.
19. To ensure smooth functioning of FOIS and other IT applications.

2. Power Control is responsible for provision of motive power to all trains by maintaining position of locomotives

1. Requisitioning engines from loco sheds for all operating requirements, i.e. Train working, Shunting and Banking.
2. Ensuring most economical use of engines by close supervision both in Traffic Yards and sheds.
3. Ensuring the return of engines to "Home Sheds" at regular intervals for servicing and maintenance.
4. Ensuring an even balance of engines and crews between running sheds for meeting demands of traffic,
5. Ensuring that light engine kilometers are kept to the minimum.
6. Providing guidance to running staff for trouble shooting.

3. Carriage and Wagon Control is responsible to assist the train and traffic control and to-

a. Ensure timely examination and fitness of all

trains

b. To keep a watch over the detachment of sick wagons/coaches and to arrange for their early repair and fitness.
c. Keeping a watch over availability of vital C&W components, like Air Hoses, Washers, Clamps etc. And efficient working of equipments & machines in C&W depot to avoid detention to trains.
d. To keep a watch over placement of wagons/coaches in sick line and their release.
e. To keep account of detention to trains on C&W account and take remedial action.
f. To provide guidance to running staff for trouble shooting.
g. For Electrical Multiple Units, this function is performed by EMU controller.
h. Monitor the movement of POH due stock to workshops

4. Commercial Control assists the Traffic and Train Control.

a. To expeditiously dispose of fun claimed and unconnected wagons, parcel consignments.
b. To keep a watch on detention to trains on Commercial account like Alarm Chain Pulling. Carriage watering, Parcel working etc., and take remedial measures.
c. To ensure quick transshipment of sick wagons by arranging matching stock and labour.
d. To keep a watch over submission of station returns.
e. Monitoring of public complaints lodged at the stations.

f. To ensure proper maintenance of public amenities available at stations.
g. Any other job entrusted by Sr. DCM/DCM.

5. Traction Power Control is provided to assist in Traffic and Train Control for–

a. Arranging maintenance blocks for Overhead Equipment (OHE).
b. Arranging alternative power supply in case of tripping etc., through remote control.
c. Monitoring OHE failures and taking remedial action.
d. Monitoring detention of trains on OHE accounts.
e. Guiding running/station staff in trouble shooting.

6. Engineering Control-

Monitors imposition & cancellation of Engineering Restrictions, working of track machines & monitoring integrated maintainable blocks. To co-ordinate works during maintenance blocks Running of Material trains.

7. Signal Control

Signal Control assists Traffic and Train Control and is responsible–

a) To keep a watch over the S&T failures and take remedial action.
b) To ensure efficient working of communication channels

8. Security Control

Security Control is responsible for the prevention of theft of property and assists passengers in trains/stations.

7.2 Tele communication Facilities in Control:

Extensive, efficient, and reliable communication network is necessary for the efficient functioning of the Control organization.

The following telecommunication network is available in control offices.

1. **FOIS Network**
   (The detail of FOIS is given in Chapter 18 of this volume, kindly refer the same)
2. **Hot lines are provided between:**
   (a) Head quarter and Divisions
   (b) Adjoining Divisions and Railways
   (c) Intercom facility to various Officers and other functionaries concerned with the control relates to important work centers with STD or Trunk Exchanges.
3. **Deputy Control Lines:**
   This circuit is provided between various functionaries in the control office, stations and important work centers like yards, loco sheds, and crew booking lobbies.
4. **Section control circuit:**
   This circuit is connected to all the stations and the section controller, Chief controller etc.
5. **Traction Power Control circuit:** This additional telephone circuit is available in the electrified sections; this is connected to T.P.C. in OHE remote control center, all stations, control-office sand selected workplaces. The section controller or T.P.C. can also be contacted from the emergency socket provided over the sections of line by means of portable telephone of the control point with indication on the electric mast, direction-wise to the nearest circuit.
6. **Section Control Board:** The Section Controller of each section is provided with control board

with Telecommunication facilities for coaching stations, certain important cabins, big freight terminals, loco shed etc. over a section. For the guidance of section controller, the layout of all the stations and sidings is painted on a large board.

The station layout diagram is also provided with details of holding capacity of each of the running & non-running lines, gradients, and signals. In electrified area, OHE sectioning diagram is provided. This depicts elementary sections in different colours & other details of sectioning post (SP) and Sub-sectioning post (SSP).

7. Graphs and Plotting:

1. Trains are plotted on control graphs which consist of horizontal and vertical lines representing distance and time respectively. Alongside the vertical lines stations are spaced to a uniform scale. Each one hour is first divided into 6units of 10 minutes each and each unit is further sub- divided into 5 smaller units of 2 minutes each.
2. Each control graph at the end of the shift may have the following information on it:
   (a) Name and total distance of the section in Kilometers.
   (b) Distance in Kms. Between each station on the section.
   (c) State of weather in each shift.
   (d) Engineering restrictions on the section.
   (e) Code names of each station of the section.
   (f) Time lost by each train on loco, traffic or

engineering account at or between stations.

(g) Section Controller's remarks against item (d).

(h) Time made up by each train on loco, traffic or engineering account.

(i) Guard's record of time lost on loco, traffic or engineering account at or between stations and remarks.

(j) General remarks.

(k) Signal failures

3. In plotting various types of trains, coloured pencils shall be used as per extant convention. The up trains are plotted from the bottom of the chart upwards and from the left diagonally towards the right; and all down trains are plotted from the top of the chart downwards and diagonally from the left towards the right.

4. For judicious crossing and precedence, it is necessary to have plotting of passenger trains at least one hour in advance depending on traffic density in easily erasable lines. Now through computerized charting this is automated. On certain selected controls, this function has been automated.

8. Master Charts:

For every section, Master Charts indicating trains run in 24 hours are prepared which show the running of each Mail, Express or passenger train over the sections according to its scheduled running. In between the running of trains carrying passengers, paths for goods trains are worked out and plotted. They are helpful in revision of timetables and planning the running

of any extra train and guidance of section controllers and should be displayed on the boards to which they refer.

7.3 Duties of Control Staff:

The main duties of control staff are as under: These are only guidelines to their day to day working and are not exhaustive.

Chief Controller (In-charge). The Chief controller is overall in-charge of the control office and is responsible for the total transportation of the Division on a day-to-day basis. His duties include-

1. A review of previous day's performance to confirm that all forecasts made have been fully met. For short falls, cogent reasons have to be pinpointed to prevent recurrence.
2. Prepare current forecast indicating assistance needed from Headquarters, adjoining Divisions, railways.
3. These will generally relate to interchange, loading and locomotive utilization.
4. Checking control charts and bringing to the notice of the Senior Divisional Operations Manager/Divisional Operations Manager all avoidable detention to trains.
5. Punctuality performance with reference to trains which lost punctuality.
6. Maintaining statistics regarding the punctuality of passenger trains.
7. Scrutiny of stock papers, Monitoring interchange obligations.
8. Watching detention to stock at stations and terminals
9. Watching the work of marshalling yards/freight terminals.
10. Maintaining liaison with neighboring Divisions
11. Watching utilization of loco and their terminal detention.
12. Checking duty hours of running staff and balancing of crews.
13. Granting civil engineering blocks, power blocks etc.,
14. Attending control office in cases of accident

15. Establishment work of control office

Chief controller (Movement)/Dy. Chief Controller/ Shift duty:

He is responsible for:

1. Running of goods trains, preparing interchange forecast, and monitoring the same, loco utilization and passenger and goods train operations in general.
2. Allotting empty stock/rakes to loading stations in accordance with current priority regulations along with Dy. Chief Controller (Stock), maintaining constant touch with adjacent divisions through regular conference to facilitate the smooth flow of traffic.
3. Dealing immediately with significant detentions or transport bottle necks and other unusual.
4. Keeping constant touch with the working of major terminals & Marshalling yards and taking timely action to deal with congestion.
5. Giving advice of serious accidents to all concerned and taking charge of the affected sections.
6. Supervising the running of oversized consignments.
7. Maintaining liaison with the Power Controller.
8. Co-ordinate the work of various Section Controllers.
9. Maintain discipline among control staff in the absence of Chief Controller.
10. Maintain co-ordination and liaison with various functionaries involved in train running.

Chief Controller (Stock)/Dy. Chief Controller:

He is responsible for:

1. Scrutinizing the indent register in detail with regard to the oldest date of registration, nature of goods and type of stock required for lifting goods as per the oldest date of registration.
2. Checking Divisional stock report and position of empties.
3. Checking of different stock reports received from the various

points and planning in advance the supply of stock, loading and clearance keeping in view interchange obligation and orders received.

4. Checking transshipment activity
5. Chasing movements of stock as per supply order issued on the previous day.
6. Keeping a close watch over hot axle, specialty pe and unconnected wagons.
7. Cross checking the daily Restriction Bulletin with Restriction Messages received from HQ office and issuing the same.
8. Assisting the Sr. DOM/DOM in allotments.
9. Keeping a close watch over the movements of seasonal perishable traffic and supply of suitable stock for its clearance.
10. Watching movements of damaged loaded stock in sick line and yards on their division.
11. Informing all major customers about their inward trains' expected arrival based on FOIS pipeline (forecast of trains expected in the division or zone), optimizing loading, unloading, transshipment etc.

Duties of Chief Controller (Punctuality)/Deputy Chief Controller:

1. Ensuring punctuality of passenger trains in system
2. Ensuring punctuality at the start of all outgoing passenger trains.
3. Maintaining Detention Reports of Coaching trains
4. Ensure that late running trains make up time.

Section Controller:

The Section Controller shall be responsible for:

1. Reporting for duty at the prescribed time and ascertaining the position of the section from his reliever about the train running, stabling, trains waiting for crew or locomotive, the track machine and block in section, any unusual and supply of the

empties for loading and removal of loaded rakes, etc.

2. Recording the movement of trains on the 'Control' graph including crossing, connections, and shunting reasons for detentions etc.
3. Arranging for the supply and clearance of stock as ordered by Dy. Controller.
4. Advising stations in advance of the work to bed one on trains on move
5. Informing sheds and stations about the late running of trains to avoid the calling of Crew and Guards earlier than necessary or to put back trains wherever advisable.
6. Informing major stations and concerned Section Controller about the current running of trains on the section and their anticipated arrivals well in time
7. Keeping in close touch with Engineering-blocks and working of material trains so as to give the maximum possible time with least detention to other traffic.
8. Incident management to include adjusting movements of trains in view of the likely impact of the incident, informing all concerned
9. Keeping a watch over damaged vehicles detached at roadside stations and arranging repairs or transshipment of their contents and proper attention on the part of the train examining staff.
10. Arrangement of ART&M/Van in case of accident.
11. Eliminating all possible detention to train and stock.
12. Watching the working of marshalling yards & major terminals.
13. Making timely arrangements for the relief of Guards/loco pilots whose duty hours are likely to exceed en-route.
14. Recording stock report (where stock clerks are not posted)

Power Controller/Traction Loco Controller:

1. Planning and directing engine movements so as to ensure

efficient engine utilization and maintaining the prescribed charts, and regular statistics.

2. Co-ordination with sheds and Dy. Chief Controllers(movement) for sending overdue
3. Engine sand obtaining time of engines coming out of shed Making timely arrangement for their life of crew whose duty hours are likely to be exceeded en-route
4. Taking timely action to balance crew so as to prevent cancellation or putting back of trains on account of shortage of crew.
5. Arranging relief in case of accidents as per Accident Manual.
6. Maintaining charts indicating engine position/ utilization.
7. Rendering advice and assistance to locomotive running staff regarding trouble shooting.
8. Carrying out any other duties allotted to him by the Sr. DME/ DME or Sr. DEE/ DEE from time to time.
9. Monitoring day-to-day stock position of diesel fuel at RDIs and watching movement of diesel fuel tank wagons (for power controllers only)

Traction Power Controller

Traction Power Controller shall be responsible for

1. While taking over shift duty acquaint him with the prevailing position of the entire section, including the working of the Remote-Control equipment position of all transformers, current breaker's interrupters and isolators, sections under power block, position of tower wagons and break down vehicle etc.
2. Maintaining continuous contact with the Traffic Section Controllers in regard to power supply affecting train movements, imposing power blocks etc.
3. Taking prompt action for restoration of supply in the event of power supply interruptions or other failures.

4. Imposing and removing power blocks in consultation with Traffic Section Controller.
5. Advising promptly the concerned officials in case of accidents, OHE breakdown, failure of power supply and keeping them posted with all important developments.

7.4 Co-ordination between Control and Stations:

1. Asking line clear: In order to avoid the detention to passenger trains for crossing a less important train, line clear enquiry for the less important train must not be asked until the train is ready to leave and until the Section Controller's permission has been obtained. The Station Master receiving the line clear enquiry must immediately ask the Controller's permission to give line clear before giving the reply. The Station Master on duty is entirely responsible for seeing that the necessary General and Subsidiary rules and Station Working Rules are observed before giving Line Clear.
2. When a Station Master for any reason finds it difficult to carry out Controller's arrangement to receive the train in yard/station due to yard/ station constraints, he must explain his reasons clearly and fully to the Controller.
3. Work at stations: The permission of the Controller must be obtained before the performance of any shunting; Controller must be informed of the likely duration of shunting to enable him to arrange crossing and precedence of trains. In the event of Station Master being unable to start a train on receipt of line clear, he must at once report the circumstances to the Controller.
4. Control order regarding crossings etc.:
   The Section Controller will give definite instructions for crossing or precedence and will not change them except under unavoidable circumstance because last minute

change of order will result in confusion and unsafe operation. The Station Master is entirely responsible for seeing that the crossing is affected safely and strictly in accordance with the rules. The Controller must see that sufficient time is available for the necessary operations to be carried out. If the Controller fails to do so, the Station Master should represent that delay may occur, but it does not allow him to disregard any rules to avoid such delay.

7.5 General Order of Precedence of Trains:

Unless specific orders to the contrary are issued by the PCOM or by those acting on his behalf, the following general orders of precedence shall be observed by control and stations.

1. ARME, ART proceeding to the site of accident.
2. President's and VVIP's specials (Unless otherwise specified in the Timetable).
3. Suburban train in peak rush direction.
4. Super-fast trains like Shatabdi, Rajdhani etc.
5. Mail/Express trains.
6. Military personnel special, if instructed by emergency control/Sr. DOM.
7. Fast Passenger train
8. Special engaged by the public. (Precedence order may be revised)
9. Passenger trains.
10. Mixed trains.
11. Military stores special.
12. Express or special goods train.
13. Through goods train.
14. Accident relief train returning from the site of accident (unless otherwise ordered).
15. Shunting and van goods train.
16. Departmental trains.

17. Light Engine, Dead Loco for clearance.

Note: -The following general principles are mentioned for the guidance of Controllers, but it must be distinctly understood that nothing in these instructions modifies the safety precautions laid down in the rules (General and Subsidiary Rules, Station Working Rules etc.).

1. A Passenger train nearing the end of its run should not normally be detained in preference to a train which has a longer run before it, as the latter train is more likely to make up time and reach its destination punctually than the former.
2. A train running to time should not be detained more than 30 minutes to effect crossing on single line. (This should be decided by the Division based on actual conditions.)
3. A train running late due to defective engine, or defect in rolling stock or any other cause which is likely to continue to operate against it and prevent it from making up time, should generally give way to a train running properly.

7.6 Accident

Controllers and other staff should thoroughly understand and act on the guidelines contained in G&SR and Accident Manual. Saving lives and rescue of injured and mitigating hardship to passengers must be given the topmost priority.

7.7 Working of Trains when Control is interrupted

When the control is interrupted and no communication with the Controller is possible, Station Masters will be responsible for the working and regulating of trains, keeping in view the instructions issued by the railway administration.

Books/Documents and basic records to be kept in Control Office:

1. Station Working Rules of all stations.
2. Work facilities are available on the transshipment sheds.
3. Schedule of shunting engines in the various yards.
4. Link diagrams of rakes and engines working the passenger

services and of goods trains were laid down.

5. Crew link diagram of the various services, for the running staff.
6. Details of maximum moving dimensions permitted on the various sections of the railway.
7. Map showing the maximum permissible axle load on all the railways with which traffic is interchanged.
8. Charts showing line capacity of the various sections.
9. Index sections and plans of the various sections of the jurisdiction and details of train watering, Engine fueling etc.
10. Master charts depicting all trains indicated in the working timetable in force.
11. Charts showing jurisdiction of the various officials' details of:
    (a) Of the maintenance branch of the post and Telegraph department responsible for maintaining control circuit wires in good condition.
    (b) Of the various departments of the railways,
    (c) Zone and telephone numbers of Civil, Police, Military authorities.
    (d) List of various hospitals with Telephone Numbers.
    (e) List of stations Civil, district-wise.
    (f) OHE Sectioning diagram.
12. Diagrams showing the layout of line wires of the Control Circuit.
13. Line patrol chart
14. List of spare coaches based in the division as well as slip coaches running on and across the division.
15. List of coaching Rakes allotted to the division and those passing over the division.
16. Rules Books (G&SR, Accident Manual, Operating Manual, Block working Manual etc. and Working Timetable)

MAINTENANCE BLOCK AND ITS MANAGEMENT

8

Block is an arrangement of blocking of track against movement of traffic over a particular section duly allowing the required Material Train or Track Machines or Tower Wagons of Departments concerned for maintenance.

8.1 Types of blocks

Four types of blocks are in use, and they are 'line block', 'power block', 'integrated block' and 'shadow block'.

1. Line Block or Traffic Block
2. Power Block
3. Integrated Block
4. Shadow Block

1. Line Block or Traffic Block:

Blocking the line for Civil Engineering works purposes and not permitting any train except Material Train and Track Machine.

2. Power Block:

Blocking the movement of electric traction traffic and is exclusively used for maintenance of Overhead Equipment (OHE).

3. Integrated Block:

Blocking the portion of a line for maintenance work by more than one Department.

4. Shadow Block:

It is a block which may or may not be an integrated block and Material Train / Track Machine/s / Tower Wagons may be permitted from either end of the block section simultaneously; for example, changing of bridge girders, replacement of turnouts, changing of contact wire, etc.,

8.2 Procedure for obtaining line block.

1. Authorized Engineering Official shall apply for 'line block' to the DRM.
2. Engineering Branch along with Operating Branch to issue 'Circular Notice' which is valid for three months. Sr. DOM of the Division shall issue 'all-concerned' message two days in advance to the actual commencement of work to the Officials mentioned in the Circular Notice.
3. Engineering Official shall arrange for protection of the work site as per local Subsidiary Rules if any.
4. Slots for 'integrated blocks' are notified in the WTT.
5. Section Controller (SCOR) will advise the SMs on either side of the block section.
6. Engineering Official and SM shall ensure that Caution Order is imposed / written and given to the crew of trains entering the block section.
7. Immediately after blocking the line, SMs on either side of block section shall place 'line block caps' on the block instrument and red ink entry shall be made in Train Signal Register (TSR). On

double line the block instrument shall be kept in Train On Line (TOL) and on single line token/token less section, 'line blocked' caps shall be placed on the block instrument handle.

8. If Material train is permitted to enter into the section as per Circular Notice, it may be sent by issue T/462 or T/A 462 and the train shall be piloted under the personal supervision of SE/JE-P.Way.
9. When it is not possible to establish communication with the SM of adjacent station, 'line block' shall not be permitted.
10. On completion of the work, track 'fit' certificate shall be issued by the Civil Engineering Branch.

8.3 Background of Rolling Block

After several deliberation at Railway Board, following points were recorded in meetings as under:

1. Maintenance of infrastructure is very important.
2. It must be ensured that maintenance works which require block disconnection must be carried out only under block disconnection.
3. Employees must not resort to shortcuts at all. It is necessary for senior officers to bring about a change in the mindset of field employees that getting block/ disconnection is not an issue.
4. Field employees must not feel constrained in asking for blocks for maintenance of infrastructure. For this purpose, all DRMs must interact with their field staff personally, and assure them that block, or disconnection would be given as a matter of safe working culture.

5. Before clearing disconnection, it must be ensured that the attended asset has been restored properly where required, testing should be carried out. The asset should be functioning correctly. All DRMs must confirm this to DG/ Safety.
6. Despite demanding blocks/disconnection, there is an uncertainty in the minds of the field staff, which must go away.
7. Punctual running of trains and maintenance are both equally important. It is the role of the GM and the DRM to maintain a balance between these two objectives. Towards this, programmed working of blocks must be ensured so that there is no uncertainty.

Despite demanding blocks/disconnection, there is an uncertainty in the minds of the field staff, which must go away. Punctual running of trains and maintenance are both equally important. It is the role of the GM and the DRM to maintain a balance between these two objectives. Towards this, programmed working of blocks must be ensured so that there is no uncertainty.

There is already a provision of corridor blocks that must be ensured. It is advised to plan out the granting of programmed Nocks in advance. There can be mega block one or two days a week when required. To address the issue, the following scheme has been designed as below.

1. Every Zonal Railway/ Division must make a 'Rolling Block Programme of 26 weeks.
2. A schedule of block works that details all the works for each traffic section for each road must be prepared for being carried out in the shadow of one another.

3. Once the 26-weeks' programme is prepared, it should be reviewed on a weekly basis. At the same time, another week's schedule must be added to the Rolling Block Programme so that the next 26-week schedule is always known.
4. Zonal Railways can devise a format for this purpose. All executing units. Construction, PSUs etc. can include their work in this Rolling Block Programme. This will be watched seriously. The programmes should come to the Railway Board. This is to be implemented immediately.
5. It is required to ensure proper planning for block working.
6. It should not happen that a block is taken and then work is left unfinished or there is bursting of block.
7. A checklist should be made in advance and followed. for all the preparation required before seeking the block/ disconnection. DRMS/ PHODs/ GMs must check that the number and duration of disconnections taken at a station is adequate for satisfactory maintenance of signaling gears there.
8. Care must be taken for proper worksite protection. Use proper caution order, speed restriction boards, Through Passenger (TP)/ Through Goods (TG) boards, banner flags, etc. All specified norms must be followed. Any work causing infringement must not be done without taking block even if it is just shifting of one rail.
9. Clear instructions must be issued, monitored and ensured on a day-to-day basis. All the staff that

would be involved in any work/ project implementation must be counselled in advance. Chance should not be taken with fittings, sleepers and cut rails.

The field supervisor already knows the deficiency in his system better than anybody else. Senior officers must facilitate the field supervisors in addressing the issues in their jurisdiction. Senior officers must visit problem- locations, for example, boulder fall locations before rains.to guide and supplement the team at site. Other aspects must also be observed as under:

1. Monsoon precautions to be ensured at all vulnerable locations. Drive to be launched for monsoon preparedness.
2. At level crossing gates, the gateman must be trained during the inspection.
3. Any problem found should be solved then & there.
4. All departments must work in a cooperative manner, including open line and construction.
5. There should be a collective effort to address all deficiencies. Work of different departments and agencies should be Clubbed during NI working and collective efforts taken to ensure safety.
6. Planning is extremely important for proper utilization of block.
7. Blocks will be granted as required - these should be used in a disciplined manner.
8. The tradition of planning for the next day's block the previous evening and reviewing it next day must be bolstered. Unplanned blocks are to be avoided.

9. Maintainers should give their movement program a week in advance.
10. All maintenance people must know in advance the location and the type of block to begiven. After due planning there would be no need to resort to any kind of unsafe working.
11. All Senior DOMs need to understand that blocks are necessarily required for safe and proper maintenance of infrastructure.
12. Sometimes there may not be enough staff at a place. "Mobile gangs" with a suitable number of staff and supervisors can be deployed.
13. Failures should not be concealed, as this is not going to help. Reporting all failures should be encouraged to get proper feedback and insights into the system.

Reference: Letter no. 2023/Safey (DM)/7/2 dated 12th June, 2023 is issued and signed by Utkarsh Executive Director (Safey) on video conference held on 06.06.2023 with General Manger and CRB and others.

Rolling Block and Rolling Block Programme

According to letter issued from Railway Board as mentioned above, Rolling Block is a line block, which will be rolled over a period on day-to-day and weekly basis with advance planning of 26th to 52nd weeks. As per correction in GR in rule 15.02 issued on 29.11.2023 issued by Railway Board, “Rolling Block Programme” means advance planning of traffic blocks or disconnections (civil or electrical or signal & telecommunication etc., including non-interlocked work) over a specified duration up to 52 weeks, required for maintenance and asset repair or replacement or creation work, to be prepared on a rolling basis by adding one week

plan every week by reviewing the output of the immediate preceding week and planning for the remaining weeks ahead."

The purpose of Rolling Block Programme can be summarized as under:

1. Fixed schedule of block for a longer time to remove uncertainty from the minds of field staff.
2. Optimum use of available resources and composite planning by all maintenance departments in single block period.
3. To prevent wastage of resources especially labour and heavy machine.
4. Better coordination and monitoring. The mega block can also be planned.
5. Less disruption to train operation especially passenger train.

भारत का राजपत्र
The Gazette of India

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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (i)
PART II—Section 3—Sub-section (i)

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

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No. 687] NEW DELHI, THURSDAY, NOVEMBER 30, 2023/AGRAHAYANA 9, 1945

MINISTRY OF RAILWAYS
(Railway Board)
NOTIFICATION

New Delhi, the 29th November, 2023

G.S.R. 870(E).—In exercise of the powers conferred by clause (g) of sub-section (2) of section 60, read with section 198 of the Railways Act, 1989 (24 of 1989), the Central Government hereby makes the following rules further to amend the Indian Railways (Open Lines) General Rules, 1976, namely:-

1. **Short title and commencement**. – (1) These rules may be called the Indian Railways (Open Lines) General (Third Amendment) Rules, 2023.

   (2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Indian Railways (Open Lines) General Rules, 1976, in rule 15.02, after clause (b), the following clause shall be inserted, namely: -

(c) Planned maintenance and asset repair or replacement or creation work shall be executed in accordance with the "Rolling Block Programme"

Explanation:- For the purposes of this clause, "Rolling Block Programme" means advance planning of traffic blocks or disconnections (civil or electrical or signal & telecommunication etc., including non- interlocked work) over a specified duration upto 52 weeks, required for maintenance and asset repair or replacement or creation work, to be prepared on a rolling basis by adding one week plan every week by reviewing the output of the immediate preceding week and planning for the remaining weeks ahead.'

[F.No.2023/Safety(A&R)/19/12]
JAYA VARMA SINHA, Member (O & BD)
and Ex-Officio Secy.

Note: The principal rules were published in the Gazette of India, Extraordinary, Part-II, Section 3, Sub-section (i) *vide* number G.S.R. 445(E), dated the 21st July, 1981 and last amended *vide* number G.S.R.535(E), dated the 25th July, 2023.

PASSENGER TRAIN OPERATION

9

Indian Railways earns about one-quarter of its earnings from passenger services and more than two-thirds from freight services. But it's the passenger services which are used directly by the large number of people. Thus, the majority of rail users judge the efficiency of railway system on the basis of an occasional journey performed by them. Passenger train operation, therefore, assumes a very great importance in the system of things for the railways.

Passenger trains are arranged to be run by the railways on a regular basis. Their schedules are revised periodically to suit changing requirements of both rail users and railways. New trains as well as new stoppages are introduced on rail user's demands from time to time. Trains are also speeded up on commissioning of different rail projects. The revised schedules are advertised to the public and are made available to the staff. Utilization of staff and infrastructure is also so planned that the entire operation becomes routine and goes in a clock like motion. Efficiency of assets utilization is also a big consideration in the planning.

Accordingly, passenger operation involves execution of well thought out arrangements on a continuous basis. It's relatively simple, straightforward and does not require very great effort on day-to-day basis.

Efforts have been made to make that schedule of work laid down for smooth passenger train operations are meticulously observed and watched like a hawk by the Operating officers as any dislocation in these schedules can lead to innumerable problems. Any dislocation in passenger train operation requires a lot of effort on the part of operating officer not only on the long-term basis but also on day-to-day basis. The punctual running of passenger trains, therefore, assumes importance not only from the point of view of the image of the Railways, but also because loss of punctuality leads to delays, dislocations in goods traffic and deterioration in the efficiency in the indices of both passenger and freight transportation.

9.1 Types of trains:

Indian Railways run various type of trains to meet the demand of Public, Industry, Indian Army and Railway department. Broadly, following types of train are run by Railways:

1. Coaching (Passenger) Trains
2. Goods Trains: Goods trains for movement of conventional freight cargo & Container trains
3. Parcel Trains: Only for parcel traffic.
4. Military Special Trains
5. Departmental Trains
    a) Departmental Material Trains-Ballast, Rail, Sleepers etc.
    b) Track Maintenance /Testing Machines
    c) Tower wagons.
    d) Accident Relief Train (ARTs)/ Accident Relief Medical Equipment (ARMEs)

9.2 Passenger carrying Trains:

Passenger Carrying Train means a train intended solely or mainly for the carriage of passengers and Other Coaching traffic. They are exclusively used to carry Passengers, Luggage and Parcel. These are divided into Sub Urban and Non-Sub urban Trains. Non-Suburban Trains are broadly divided into Express and Passenger trains.

a) **Mail/ Express/Trains:**
Express trains have few stoppages and generally travel for medium to longer distances and they have superior passenger amenities on board compared to Passenger Trains.
   1. Vande Bharat Express and Gatimaan Express– Semi High-Speed trains
   2. Rajdhani Express
   3. Shatabdi Express
   4. Tejas Express
   5. Humsafar Express
   6. Sampark Kranti Express etc.

b) **Local Passenger Trains:**
Passenger Trains have more stoppages and mostly cater to the local needs, generally travelling short distance.

c) **Suburban Trains:**
Suburban trains are mainly operational in metro cities like Mumbai, Chennai, Kolkata, Hyderabad and cater to the demand of local passengers. EMU (Electric Multiple Units)/ DEMU (Diesel-Electric Multiple Unit) are used mostly for suburban traffic.

d) **Summer/Festival/Mela Special Trains:**
These trains are planned to clear extra rush during summer rush, festivals, Mela etc. to meet special demands for a certain period.

e) **Staff Shuttles /Workmen's specials**:
These trains are planned for Railway employees, especially workshop employees working in shifts, at times when regular passenger trains are not available.

f) **Tourist trains:**

The following trains are run mainly by IRCTC and Other State Tourism Departments for tourism purposes-

1) Bharat Gaurav Trains,
2) Luxury Tourist Trains viz. Maharajas' Express, Golden Chariot, Palace on Wheels and Deccan Odyssey,
3) Deluxe Trains viz. Buddhist Circuit Special Train and AC Deluxe Tourist Train,
4) Budget Tourist Trains viz. Pilgrim Special Tourist Train, and
5) Charter Trains/Coaches and Saloon Cars

Indian Railways serve the country as the main mechanized mode of transport for the inland traffic. Long distance trains crisscross the length and breadth of the country, bringing people from different parts together. Though in the past, when road transport had not been developed, Railways provided the only mechanized mode of transport in the country, whether short distance or long distance, with the development and advances in the motor transport and establishment of elaborate road network, bulk of the short distance traffic has moved to the road. Railways are also encouraging transfer of this traffic to road as road transport is more suitable mode for this type of traffic. Railways are mainly concentrating on long distance, inter-regional traffic, and urban transport in the major metropolitan cities. Only that part of non-suburban traffic can be served by railways better those forms high-density corridors and it is too large for the road transport to cater to. These corridors are between major industrial and commercial centers like Kanpur-Delhi, Ahmedabad - Vadodara, Bombay-Pune etc. Railway is also suitable for certain extensions of suburban traffic converging into large cities which act as magnets for employment and trading activities and attract large number of passengers on regular basis.

Rake Compositions, Rake Links and Utilization of Coaching Stock Introduction

Rake composition of passenger carrying trains depends upon the following considerations: -

a) Passenger's requirements.
b) Availability of various types of coaches.
c) Type of train viz. Ordinary Passenger or Mail/Express, or Superfast or Rajdhani/Shatabdi Express trains.
d) Lengths of Platforms.
e) Rake maintenance facilities.

9.3 Passenger's Requirement

The various passenger classes for travel on the Indian Railways could be summarized as follows: -

Non-Airconditioned

a) Second (Ordinary)
b) Second Sleeper-3tier.
c) Second Sleeper-2tier.
d) First class (sleeping accommodation)
e) First class-Chair car

Air-Conditioned

a) AC Chair Car
b) AC Sleeper-2 tier
c) AC 3 tier.
d) AC Firsts Class.

Rake Composition

Rake composition will include-

a) Type of coaches on the train.
b) Total Number of coaches on the train.
   -Normal Composition
   -Maximum permissible load.

9.4 Types of Coaches to be provided.

The types of coaches must be provided keeping in view the passengers' requirements and relative importance of trains. Ordinary short-distance passenger trains may have only Second (ordinary) coaches with sitting accommodation. Medium and long-distance ordinary passenger trains may be provided with Second Sleeper coaches and also a First-class coach.

Mail/Express trains will normally consist of Second Ordinary, Second Sleeper, First Class and Ac two and three tier coaches. More important trains may have AC First class in addition. Rajdhani and Shatabdi Express trains area fully air conditioned. Intercity Shatabdi Express trains have Air-conditioned sitting accommodation while Rajdhani Express trains have AC Ist class, AC-two tier, AC-3 tier and AC Chair Cars.

All trains must have a brake van in front and one in rear. Generator cars are provided on Air-conditioned trains and other specified trains equipped with End-On Generation. In Mail and Express trains space is also provided for postal vans as per the requirements of the postal department.

Dining or pantry cars are also normally provided on long-distance trains.

A few important codes used for indicating the types of coaching stock are listed below:

Code	Stands for
G	Self-generating.
W	Vestibuled.
L	Luggage Compartment
R	Brake van
Y	(Suffix) Ladies
Y	(Prefix) Suburban
AC	Airconditioned
S	Second Class
F	First Class

FC	First Class with coupe
GSCN	Self-Generating Second Class 3 tier (Sleeper)
WAC	First ACC
WACCN	AC Sleeper (3 tier)
WGACCW	AC Sleeper (2 tier)
GSCZAC	Vestibuled second class AC Chair Car
WGECZAC	Vestibuled First Class AC Chair Car
VP	Bogie parcel van
PP	Full Postal unit.
PPH	Half postal unit

9.5 Lengths of Trains

Trains on the Main line/Trunk route are generally overcrowded and still there is often demand for more accommodation. Additional demands for more accommodation are being met by introducing additional passenger trains and also by increasing the lengths of the trains. With diesel and electric traction, it has been possible to increase the composition of trains to 24 bogies on the B.G. In the long run the Indian railways have plans to run 26 bogies trains on selected trunk routes.

Maximum length of a train depends on: -

a) Hauling power of the locomotive
b) Maximum speed at which the train is required to be run.
c) Lengths of platforms at terminals and intermediate stopping stations.
d) Strength of the couplings.
e) Brake power available.
f) Signalling system.

9.6 Marshalling of Coaches on a Train

While marshalling the coaches on a train, the following precautions should be observed: -

a) Marshalling should conform to Anti-telescopic Marshalling orders.

b) One brake-van should be provided in the front and one in rear. Passengers carrying coaches should normally not be attached outside brake-vans. However, if it is necessary to do so, it should conform to instructions contained in General and Subsidiary Rules. In any case, not more than two coaches should be attached outside the rear brake-van.
c) Same class of coaches should normally be grouped together.
d) Dining Car/Pantry Car should normally be in the middle.

9.7 Rake Links

Rake links are chalked out for timetabling the movement of rakes of passenger carrying trains on a regular schedule. While making these schedules the requirements of maintenance of rakes are duly taken into account. This will include 'Primary' and 'Secondary' maintenance of rakes.

Primary Maintenance

Primary maintenance is carried out by the Zonal railway to which the rake belongs. All scheduled repairs such as repacking of axle-boxes, cylinder overhauling, clappet valve testing, water tank wash out are carried out during primary maintenance in addition to washing, cleaning and safe-to-run examination. Normally six hours are provided for such maintenance at the homing depot of the rake.

Secondary Maintenance

Only cleaning and safe to-run examination as well as minor repairs are carried out during Secondary maintenance. For this also six hours are normally provided.

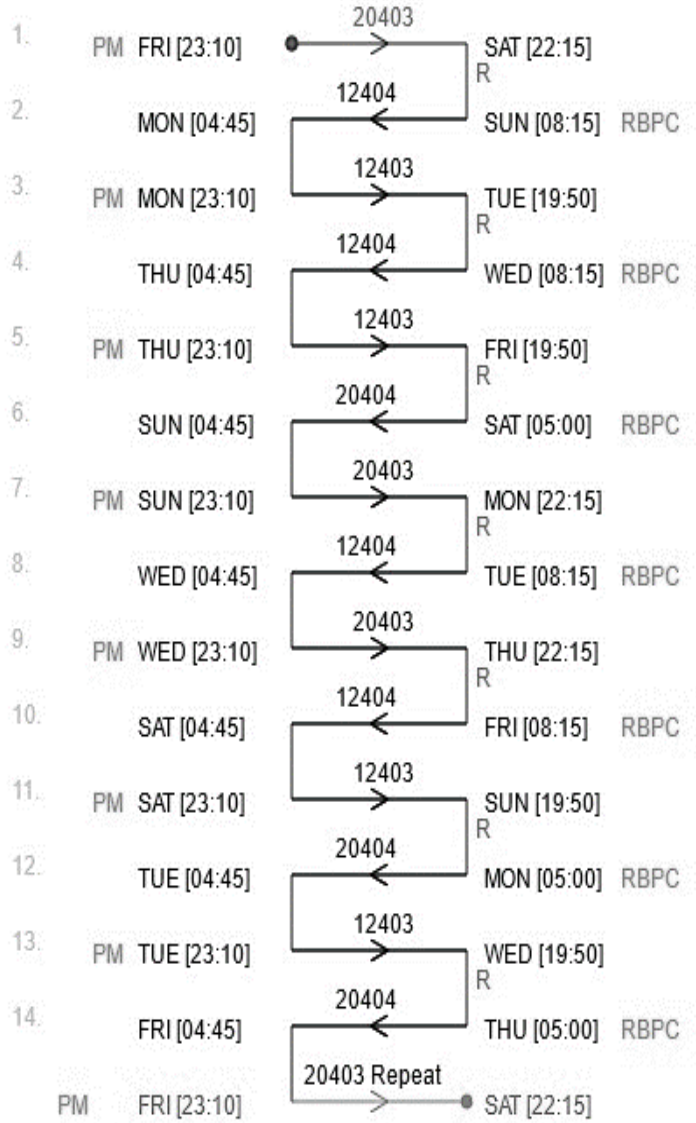
Booklet showing rake links, composition etc. of Passenger Carrying Trains: -

Each Zonal railway publishes such a book for guidance of staff. This booklet gives the following information for all passenger carrying trains: -

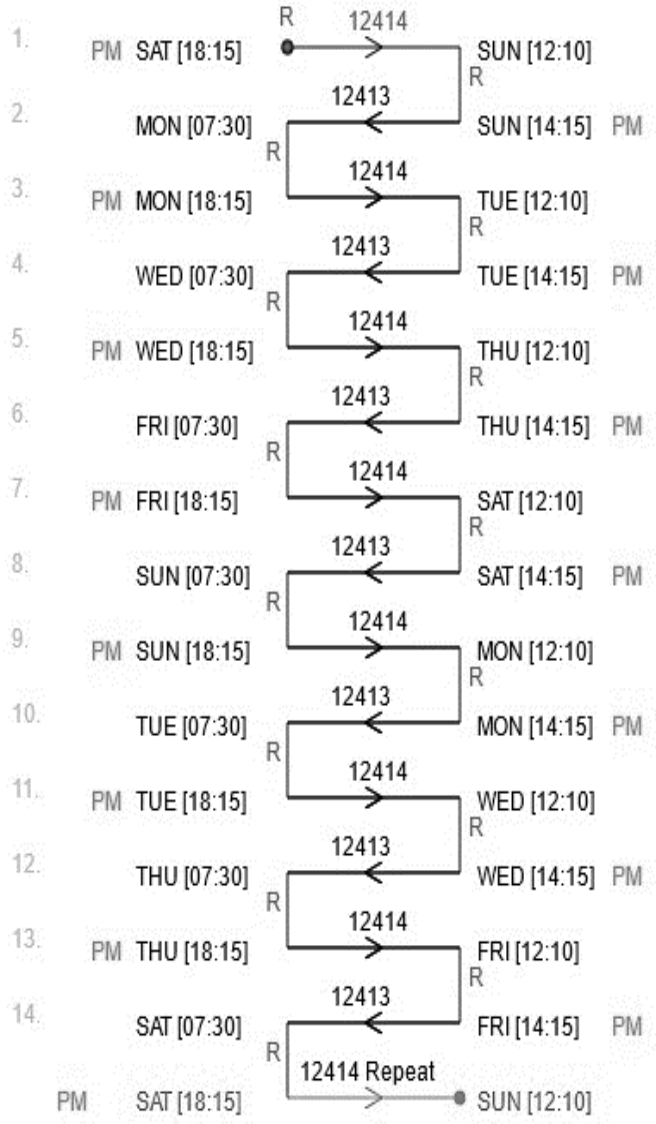
i) Rake Links.
ii) Normal Composition of rakes.
iii) Marshalling order of each rake.
iv) Permissible loads.
v) Maintenance stations.

A typical example of a rake link covering 2403/2404 and 2413/2414 Super-Fast Express trains on the Northern Railway is given below: -

ICMS Rake Link No.: 163065 Total Train Service: 14 [PM Depot: PRYJ] [R: Rake R



ICMS Rake Link No.: 90417 Total Train Service: 14 [PM Depot: JAT] [R: Rake Rev



It will be seen from above that two daily Superfast trains, one between Jammu Tavi and Delhi and other between Delhi and Jaipur, are covered by this rake link. It will also be seen that the number of rakes required is equal to the total turn round time in days. In this case it is two days and two rakes.

Utilization of Passenger Coaches

As on 31.3.2022, Indian Railways had 11,773 EMU coaches and 61,002 conventional passenger coaches. Efficient management and utilization of this large number of coaches is an important aspect of passenger operation.

Information system for controlling usage of Passenger Coaches

Control of coaching stock is exercised at Zonal HQs level. Earlier 'Cardex' system was used wherein there was a distinctive card for each vehicle in the Coaching Cabinet section of the PCOM's office. Now railways have installed computers for this purpose.

Every day all interchange points convey the out-reports of trains interchanged to the Zonal HQs. In addition, Divisional Control conveys 18.00hrs. daily coaching stock position which gives the details of spare coaches, programmed bogies, coaches attached and detached etc. Zonal HQs feeds the information in the HQs computers and obtains requisite outputs for exercising proper control on the movements of coaching stock.

Important aspects to be looked after by the HQs office include the following:

1. Rake compositions of trains as per prescribed marshalling and trains are not running under load.
2. Coaches are sent for POH to workshops as per schedule.
3. Percentage of ineffective coaches is within prescribed limit. Coaches marked sick out of

course are repaired expeditiously.

4. Spare coaches are not held in excess of the target.
5. Foreign railways' coaches are returned to the owning railways expeditiously. Also chasing the foreign railways to return own railways coaches expeditiously.
6. Steps are taken to accept maximum movement of programmed bogies and seasonal traffic within existing resources.

Improving Utilization of Coaching Stock

The following steps help to improve utilization of coaching stock:

1. Having an efficient information system for control of coaching stock: -
2. Careful planning of Rake Links with minimum required lie-over periods at terminals. For example, in the rake link no 25 of the N. Rly given in para 2,412, the coaching stock utilization is only 598 Kms per day. while for 2419/2420 Lucknow New Delhi stock Gomti Express trains the utilization is as high as 1014 Kms per day. Standardization of rake compositions can help us to prepare Rake Links combining several trains minimizing lie over periods at terminals and improving utilization of stock.
3. Reducing ineffective percentage of coaches by better maintenance.
4. Not holding stock in excess of necessary requirements.
5. Quick repairs and retrievals of coaches marked sick out of course.

Marshalling of Mail/ Express/Passenger trains:

The general principles kept in view while marshalling is:

Position of upper-class coaches, ladies' compartment, dining car, in respect of easy accessibility normally the dining cars or the catering compartments, air conditioned and upper-class coaches, shall be marshaled in the middle of the train or as near to it as possible and ladies' compartment will be near Guard's SLR.

Non-passenger carrying stock shall preferably be marshaled next to the engine or in the rear of the train, defining the area for stacking, loading and unloading of parcels packages and mails on platforms.

The Marshalling of SLRs and Anti-Telescopic/Steel-Bodied Coaches on PassengerCarrying Trains:

Marshalling of mail and Express trains:

In case of SLRs which have passenger portion on one side, luggage cum brake portion on the other, the SLR should be marshalled in such a way that the luggage and brake portion is trailing outermost or next to engine.

In case of new design of SLRs with Passenger portion in the middle, these can bepositioned in either way.

In case, anti-telescopic / steel bodied SLR is marshalled with passenger portion next to the engine or rear SLR with the passenger portion towards the end of the train "the passenger portion of SLR should be locked.

In case of shortage of SLRs, any other suitable coaching vehicle or a VPU may be provided, and in case a coaching vehicle is attached its doors should be locked to ensure that passengers cannot occupy it.

Two anti-telescopic or steel-bodied coaches should be marshalled inside the anti-telescopic or steel – bodied SLRs at both ends.

After providing anti-telescopic or steel – bodied SLRs for Mail/ Express trains. All the available anti-telescopic or steel-bodied

SLRs should be used on main line passenger trains and after meeting this requirement, the rest should be used on Branch Line Passenger Trains. Anti-telescopic or steel-bodied SLR should be marshalled in the same way as in the case of Mail/ Express trains.

Marshalling of short service trains:

The Railway Board has permitted marshalling of three coaches in front and rear of the SLR on short trains, provided they have working brakes and subject to two end coaches at either side are anti-telescopic. An Inspection Carriage may be attached as fourth trailer coach on such trains. (Also refer local Subsidiary Rules if any)

Non- Passenger coaches:

VPs, LRs, WLRRMs and other coaching vehicles, which do not carry passengers may be marshalled as operationally convenient. Inspection carriage whether anti-telescopic / steel bodied or not occupied or being worked empty may be marshalled as operationally convenient.

Reserved Bogies and Saloons Occupied by VIP:

Reserved bogies occupied by passengers and Inspection Carriages/ Saloons occupied by VIPs should be treated as passenger coach and marshalled accordingly. If they are anti- telescopic or steel-bodied, they can be marshalled anywhere as operationally convenient. If they are wooden-bodied, they should be marshalled inside the required number of anti- telescopic/steel-bodied coaches.

Sectional/Through Service Coaches:

1. Sectional / through service coaches, if they are anti-telescopic or steel-bodied, may bemarshaled as operationally convenient. However, wherever feasible, they should be marshaled inside the SLR, LR, and VP etc.
2. Sectional / through service coaches, other than anti-telescopic/steel-bodied, should be treated like other passenger

coaches in the train formation and should, therefore, be marshaled inside the required number of anti-telescopic/steel bodied coaches.

While determining the position of marshalling of sectional thorough service coaches, the fact that these coaches will be attached/detached en-route, leaving the train service coaches exposed as outermost, should be borne in mind and therefore, the marshalling order of sectional / through service coaches and train service coaches decided in accordance with the instructions contained in Para (a) to (e) above.

POH/Sick coaches returning to Shops:

In the case of POH/sick coaches, which are returned to shops for major repairs and are attached to passenger trains, such coaches should be properly locked, and windows secured, so as to prevent entry of any passenger into these coaches. In that case, it is not necessary to attach these coaches according to safety marshalling instructions and can be attached next to the train engine or rearmost as convenient. If for any reason it is not possible to lock up these coaches, such coaches should be treated like other passenger coaches in the train formation and should, therefore, be marshalled inside the required number of anti-telescopic/steel body coaches.

It is also desired that the above instruction on safety marshalling of passenger carrying trains should be made known to all the staff and officers concerned and these should be followed strictly.

Block Rake Composition:

For block rake composition and marshalling order, 'Normal composition and marshalling order and rake link of passenger trains' are issued by PCOMs of respective railways from time to time.

Mixed Trains:

Classifying a passenger carrying train as a mixed train needs authorization by PCOM. On such atrain, coaching and goods stock shall normally remain in one block (except where a deviation is permitted) and their marshalling will also be laid down by the PCOM. Normally goods stock should be attached next to engine and coaching stock inside the rear brake van.

Attaching of Vehicles outside the Rear Brakevan:

Vehicles outside the rear Brakevan can be attached in accordance with the provision of local Subsidiary Rules if any.

Attaching of vehicles in rear of Brakevan in fully vacuum train

Attaching of power plant bogies

Attaching of damaged vehicles

Marshalling Chart for Passenger/Mixed/Goods Trains:

S.N.	Type of Stock	Marshalling order
1	Empty coaching stock, coveredmotor trucks etc.	As operationally convenient but preferablymarshalled as outermost vehicle at either end.
2	Motor car etc. loaded in open wagons covered with wagon sheets.	In the rear of the Train either as a last vehicle or inside the rear brake van
3	Banking Engine	(a) On ascending gradients in rear of train, (b) On descending grades in front,

Attachment of Dead Locomotives:

(Railway Board's letter: 1. No. 99/Safety(A&R)/19/10 dated 10.12.2001 and 2No.2000/M(L)/466/803 dated 1/9th March 2004)

Conditions for attachment of dead locomotive: -

Certificate for 'Fit to run' is issued by Section Engineer/Loco Inspector/Power Controller for Passenger/Goods train.

Maximum permissible speed of the train shall not be less than maximum permissible speed of the dead locomotive.

Arrangements have been made to ensure that brakes can be applied on dead locomotives in synchronization with working locomotives.

Running double/triple headed is permissible on the section over which the dead locomotive is to be hauled.

When a dead electric locomotive has to be moved on a non-electrified section, special check shall be made regarding its infringement to the schedule of maximum moving dimensions. In the case of any infringement, the dead locomotive shall be treated as an ODC.

As a final check, the coupled locos should be run for about 500 meters and the Loco Pilot shall check for any abnormal rise in the temperature of the wheels of the dead locomotive and shall also check it at subsequent stops during the journey.

In addition to freight/passenger trains, a dead locomotive can also be attached to Mail/Express trains including Superfast trains but excluding Rajdhani and Shatabdi if the locomotive brakes including proportionate brakes are operational and maximum permissible speed of the locomotive is not less than the booked speed of the train in which it is being attached. Locos with inoperative brakes can be attached subject to the brake power of the train being within the permissible limits. Locomotives with defects in under-gear equipment can be attached only to freight trains.

Attaching/hauling of dead locomotives by Mall/Express/Super-fast/Passenger trains:

Only one dead locomotive (diesel/electric) can be attached.

Brake power of the train should be 100% excluding dead locomotive

As far as possible, brakes should work on dead locomotives. However, if it is not possible, then in the case of air-braked trains, brake pipe and feed pipe of working locomotive shall be

connected to brake pipe and feed pipe of trailing stock and dead locomotive will work as piped vehicle.

In the case of vacuum braked train, vacuum pipe of locomotive shall be connected with vacuum train pipe of trailing stock and the dead locomotive shall be treated as a piped vehicle. If the locomotive is fitted with pure air braked system and vacuum pipe is not provided on locomotive then it should be attached with air braked trains only.

Attaching/Hauling of dead locomotives by goods trains:

Movement of maximum three locomotives (2 working + 1 dead) with load is permissible subject to observations of all restrictions on operation of double/triple headed working locomotives in the section provided that brakes in dead locomotives are operational.

The above instructions should be strictly followed, and it is, therefore, advised that these guidelines be supplemented in the respective Subsidiary Rules also.

Escorting of dead Locomotives: -

Escorting of locomotives (diesel as well as electric) attached to freight and passenger carrying trains is not necessary if the brakes including proportionate are fully operational and the dead locomotive is attached next to the train engine. The dead locomotive will continue to be escorted if attached in the rear of brake van or has defect in under-gear equipment.

9.8 Medical Relief Van:

Can be run without brake van (Local SR should be followed for Ghat Section)

Inspection Carriages attached to Light Engine:

Maximum three inspection carriages occupied by the officers can be attached. In case more than 3 Inspection carriages are attached, rules regarding running of goods trains without brake van will apply.

Rake Link:

The overall high-level plan for rake movements is described in a rake link booklet issued for official use only by a Zonal railway, which has details of the planned rake links, composition, marshalling order, permissible loads and accommodation in Mail / Express & Passenger trains handled by the Zone.

The schedule of the train is drawn by the respective Zonal Railway so as to run to the maximum before taken for the regular maintenance. This is published through a booklet by PCOM and CPTM. The rake link is drawn up keeping in mind asset utilization and maintenance schedules for the stock. The day-to-day operational schedules are then drawn up with this as the basis and used by the operational staff / marshalling yard staff. The rake link is also used by the reservation staff to determine the sizes and distribution of reserved accommodation quotas.

At each station based on the train schedules, a platform and siding occupancy chart is drawn up. This provides, for each day of the week, an indication of which platforms and sidings are occupied by which trains and at what times. Introducing a new train at a station (originating or passing through) involves finding an appropriate slot in this chart.

The overall scheduling, traffic planning, and operational aspects of a division are under the control of the Sr. DOM of a division who is ultimately responsible for the performance of the division in terms of punctuality, efficiency etc.

FOIS and COIS help manage the movements, schedules and punctuality of freight and coaching stock respectively in a better way. The FOIS and COIS networks include many 'ARCs' (Activity Reporting Centre) such as goods sheds, sidings, transshipment points, interchange points, wagon repair workshops, C&W locomotive sheds, fuel stations, crew change locations,

stations, and locomotive workshops. Data from all of these ARCs is incorporated into the system

Rake sharing:

Almost all trains, except special short distance trains, share rakes, for better utilization of the rolling stock, and also to reduce the pressure on stabling sheds which may not have facilities to stable or store many rakes for very long. Two-way rake sharing is very common, where a rake is used for one train and then immediately used for another train going back towards the rake's point of origin, so that the same rake is later available for first train's service on another day.

Sometimes rakes are shared between a pair of trains that do not have the same two endpoints. Often the station that is the point of origin or termination of a train owns the rake for that train, but it is not always so. A rake may also work a service outside its owning railway's jurisdiction. Trains which are not very frequent (weekly or bi-weekly) will often not share their rakes with any other trains. Trains that cover more than about 2000 km usually have dedicated rakes, because primary maintenance on coaching stock is usually done after every 2500 km.

Rake link has the details of which trains share rakes with which other trains, how and when rakes need to be formed or split up, and many other details as under:

1. Composition
2. Marshalling order
3. Vacuum or air brake
4. Permissible load
5. Train watering
6. Postal accommodation
7. Sanction runs
8. Locomotive allotment
9. Maintenance stations

10. Lie-over periods
11. Distance in Km. earned in a round trip

Instructions for sending sick / defective coaches / coaches due for POH to shops

Advantages of Rake Links:

1. More service to the required/needy area.
2. Idling hours of coaches reduced before or after the maintenance schedule.
3. Coaching yard congestion is reduced
4. Utilization of coaches increases.
5. More Passenger throughput thereby more revenue to railways.
6. More availability of platforms, pit lines and maintenance lines.

Factors to be taken into account while chalking out the rake links:

1. Schedule of Train
2. Time and station where primary and secondary maintenance of rakes are undertaken
3. Time for shunting placements and removal of coaches at various checking points
4. Optimum utilization of coaching stock.

Number of rakes required for a link i.e. The turn round of the link in days.

General Instructions:

In order to provide the allotted accommodation on various trains, it is imperative that the different types of coaches earmarked to run on set rakes operating on Mail, Express and Passenger trains are invariably kept intact.

Should it become absolutely necessary to detach a coach from a set rake due to sick marking or any other valid operational reason, it should be ensured that the same is replaced on the relevant set

rake on the next trip.

All concerned will ensure that the authorized composition of all trains is constantly watched, and deviation should be rectified at the earliest opportunity. Supervisory officials will also concentrate on proper upkeep of coaches by checking fittings, equipment, etc. frequently.

Booked Speed -

This is the speed which determines the normal running time of the trains and on the basis ofwhich timetable is prepared. This is generally 10% less than the maximum permissible speed.

Average Running Speed -

This is the average speed of the train on run. For calculating this, total time consumed in halts isdeducted from the total time taken by a train between originating and termination stations.

Commercial Speed / Overall Speed -

This is the average time taken by train per hour from its start to termination. Long distance passengers are concerned with this. They are not interested in how fast a train runs between the stations. What they are concerned about is how fast it can reach its destination.

Speed Restriction -

Maximum permissible speed and booked speed relate to the particular section of the railway engine. Actual condition of the track bridges, curves and nature of signalling at certain stations may require the trains to be run at speeds which should be lower than the booked speed of a particular train. For this, special speed restrictions are imposed, which are of two types:

Permanent Speed Restrictions - These speed restrictions are the ones which are supposed to be for sufficiently long duration and are mentioned in the Working Timetable. Since copies of the Working Timetable are available with the train crew, no other intimation is required to be given to them on day-to-day basis. The

time which the trains are expected to lose in observing their restrictions is built into the running time and is timetabled accordingly. These restrictions last the currency of a timetable and are reviewed at the time of revision in the timetable.

Temporary Speed Restrictions - A number of speed restrictions may have to be imposed for a short duration either on account of defects in track and related equipment or to facilitate repairs to the track and OHE and signalling installations. Requirement of time for such repairs is assessed well in time before a new timetable is introduced and this time is separately provided for in the timetable and is called 'Engineering Allowance' (EA). This time is also provided in the timetable short of junction stations or at the divisional/zonal interchange points. If there were repair works elsewhere on the section, trains would run late, and this would be adjusted before the junction interchange points.

Minimum Running Time

This is the time which a train should take between two stations when running at maximum permissible speed. This is calculated taking into consideration the permanent speed restrictions that may be in force from time to time in the concerned sections. This would be different for different trains and the Loco Pilot is in no case permitted to take less than the minimum running time relevant to his train. Guards of the trains and Section Controller keep a watch on this aspect so that in case of over-speeding by the Loco Pilots, they may take steps to check them.

Normal Running Time

This time is based on the booked speed of the train and is generally about 10% more than the minimum running time. The Loco Pilot is expected to run faster to the minimum running time when running late and is expected to make up time.

Calculation of Running Time

Calculation of running time is based on a number of factors, viz.:

1. Distance between the two stations
2. Hauling power of the locomotive
3. Load of the train
4. Permissible speeds
5. Permanent speed restrictions
6. Gradients and curves
7. Time required for acceleration and deceleration.

This time is calculated with the help of computer by RDSO and is further validated through trails.

Authorized Detentions

This is a time for which a train can be detained at a junction station to wait for another train running late in order to facilitate passengers to maintain connections at the junction stations, some trains can be detained for a specific period, after this detention the train can give connection to another nominated train so that undue hardship to the passengers is not caused. These are, however, the outer limits and connecting train cannot be detained, if it is not likely to connect the trains to be connected within the prescribed limit. This is given in the Working Timetable.

Coaching Vehicle Census:

Coaching Vehicle census is conducted as and when the directives are received from Railway Board. Prior to conducting a coaching vehicle census, CPTM holds a meeting and instructs the census officials. The month, date time of census is notified to all the staff involved in census. Unlike, goods wagon census, coaching vehicles census is not laborious, as the vehicles are generally run-in rakes, and they are keenly monitored daily. A Cardex system in the coaching cabinet was a method to monitor the movement of individual coaches. After full implementation of COIS, the monitoring of the movement of coaches will be made easier.

All the staff involved in the census duties are to be briefed about their responsibilities. A mock census has to be conducted on the

nominated day prior to the official census. The lacunae in the mock drill are to be identified and corrected. During the enumeration each vehicle should be stenciled by a census symbol of equilateral of six inches each side in white colour at extreme left of the vehicles on both sides. A representative of mechanical branch was also involved to identify the mechanical code of the wagons. Each railway should update the list of the condemned vehicles after the last census was held, with necessary details, well before the census. The census timingsare to be followed strictly.

Advantages in coaching vehicle census:

To know the location of loading vehicles and their status.

To identify and take them to the maintenance depot in case the coaches have become due forPOH and other repairs.

To identify the area where excessive holding exists, which leads to coaching yard congestion.

To compare the requirements with that of allotment and to suggest better supply.

To compile the utilization statistics and to see the viability for future utilization.

For introduction of new coaching trains.

9.9 Coaching codes

Vehicle codes for Coaching stock: - The following code letters must be used to designate the various designations of coaching stock in use:

Nature of stock	**Transportation Codes**
Bogie first class F Bogie first class with servants' compartment	FQ
Bogie first class with coupe compartment	FC
Bogie first class with coupe and attendant compartment	FCQ

Bogie second class (self-generating)	GS
Four wheeled first and second class	EFS
Four wheeled first class	EF
Bogie first and second class	FS
Bogie first and second class with attendant compartment	FSQ
Bogie first with coupe and second-class with attendant comp.	FCSQ
Bogie first class AC and First-class luggage and Brake comp.	ACFLQ
Bogie first with coupe AC and FC and attendant compartment	ACFQ
Bogie first class air conditioned	FAC
Bogie fully air conditioned	WAC
– do – with coupe and second	FCSC
Bogie first and second class	FS
Bogie first with coupe second luggage and brake	FCSLR
Bogie first with coupe second	FCS
– do – attendant compartment, luggage and brake	FCSQLR
Four wheeled second class	ES
Bogie second class 3 tier sleeping car (vestibule)	WGSCN
Bogie second class	S
– do – with permanent ladies' compartment	GSY
Bogie prison van	VJ
Bogie lower class day cum sleeping car	WGSCG
Freight And Brake Vans	
Four wheeled freight van of 4-wheeler	EL

luggage van	
Bogie freight van or luggage van	**L**
Four wheeled brake van with luggage compartment	**ELR**
Bogie parcel van	**EVP**
Four wheeled parcel van	**LR**
Four wheeled fruit van	EVF
Bogie luggage and brake van	**LR**
Bogies second class luggage and brake van	**SLR**
Postal Vans	
Bogie second and full postal van	SPP
Bogie second class and 2/3rd postal van	PPE
Bogie full postal van	PP
Bogie second class and ¾th postal van	PPI
Bogie luggage brake and full postal van	LRPP
Bogie second and ¼th postal van	PPQ
Bogie second and ½nd postal van	PPH
Vans	
Four wheeled prison van	EVJ
Four wheeled refrigerator van	EVR
Cars	
Bogie dining car	CD
Bogie kitchen car	CK
Bogie inspection car	CE
Bogie tourist car first class	CT
Bogie tourist car second class	CTT
Bogie state saloon for ministers or VIPs	CR
Railway Services	
Bogie inspection car (administrative)	RA
Bogie inspection car (Jr. administrative)	RB

Bogie subordinate carriage	RD
Four / Six wheeled inspection car (Sr. Assistants)	ERB
Four wheeled inspection cars (Jr. Assistants)	ERC
Four wheeled subordinate inspection cars	ERD
Bogie cinema cum exhibition car	RPCB
Four wheeled mobile TXR van	ERW
Four wheeled store van	ERS
Bogie store van	RS
Bogie accident tool or relief van	RT
Four wheeled accident tool or relief van	ERT
Four wheeled traveling charging or dynamo van	ERM
Bogie traveling charging or dynamo van	RM
Four wheeled crew rest van	ERR
Bogie medical van or mobile dispensary van	RH
Four wheeled medical van	ERH
Other Stock	
Four wheeled horse boxes (double)	EHH
Mobile library van	ERL
Four wheeled motor van	EVK
Rail motor car, first class	ZZF
Military Cars	
Bogie military car vestibule	WM
Bogie ward cum dining car air conditioned	WACMRD
Bogie kitchen car	MK
Bogie kitchen car Indian troops	WML

vestibule	
Bogie dispensary car vestibule	WMHRA
Bogie generator car vestibule	WMRM
Bogie officer's car	MF
Bogie family car	MR
Bogie air-conditioned sick officers' car	WACMRA

Note: -

1. "Y" Suffixed to indicate permanent ladies compartment. "Y" Prefixed to indicate suburban stock.

"A" Prefixed to indicate articulated vehicle"W" Prefixed to indicate vestibule vehicle.

"G" Prefixed to indicate self-generating equipment.

In case two or three letters out of "Y" "A" "W" are to be used, they willbe shown in the above order when prefixing or suffixing to codes.

The code letters of each description of coaching vehicle are placed at eachend of the vehicle on the left bottom end panel at diagonally opposite corners. The staff must refer to these code letters in case of doubt.

All coaching stock is vacuum braked.



TIMETABLING OF PASSENGER TRAINS

10

The history of Railway timetable is very interesting. As we know that the first Railway has started in Great Britain. Initially, railway companies were hesitant to issue timetables and advertised fixed schedules of trains they were running. With the teething problems in railway operation, the companies were not sure whether they would be able to run the trains as per commitments or schedules.
During that time, Mr. Bradshaw used to sell the maps. To increase the sales of maps, he had also started publishing schedules of the trains along with the maps. The idea was to sell more maps as people would take his maps to newer places to boost his sales. The Railway companies had consented to his publishing the timetables as it did not involve any commitment on their part. Soon, however, they realized the usefulness of advertisements of the fixed timings as their clientele went up and the companies started issuing the timetables themselves.

With the passage of time, teething problems were also taken care of. Today, there is statutory obligation to railway companies in most of the countries that they require to publish timetable or schedule of passenger train. In India also, as under the sections 49 of The Railway Act, 1989, Indian Railways are required to publish timetables of the trains. The section 49 of Railway Act read as under:

Section 49 in The Railways Act, 1989

49. **Exhibition of certain timings and tables of fares at stations. —**

(1) Every railway administration shall cause to be pasted in a conspicuous and accessible place at every station in Hindi and English and also in the regional language commonly in use in the area where the station is situated, —

(i) a table of times of arrival and departure of trains which carry passengers and stop at that station, and

(ii) list of fares from such station to such other stations as it may consider necessary.

(2) At every station where tickets are issued to passengers, a copy of the timetable in force shall be kept in the office of the station master.

10.1 Timetables

Time table shows details of arrivals and departures at every stopping station of all trains carrying passengers. As time tables are revised on yearly basis, they also need to be published each

year afresh. These are published at the pan India level in the form of "Trains at a Glance" whereas zonal railways publish them separately.

The objectives of passenger time table are as under:

(1) Information for intending passengers regarding schedules of arrivals and departures; through sectional and suburban trains; connections at various stations; and the amenities and facilities available to the passengers at stations.
(2) A guide to the railway staff in arranging trains, crossings, precedence's, receipt and dispatch at terminals, and provision of motive power, crew, maintenance and other facilities.
(3) A guide to postal services for transmission of mail.
(4) A database for calculating the requirements of rolling stock, locomotives and running staff.
(5) To satisfy statutory requirements. Section 49 of the Indian Railway Act lays down that railway must exhibit timetables for the guidance of the public.

10.2 Types of Timetables

Timetables can be divided into two categories, one for passenger and other for railways for their internal use. The passenger timetable carries all required information about arrival, departure and halt of trains along with other detailed information required for passengers. While the railways staff's timetable carries the information which is required to be essential for operation of train

punctually and safely. The different types of timetables are as under:

For passengers

1. **Trains at a Glance** - This is an abstract form of timetable for all Indian Railways. Important trains are shown with time of arrivals and departures at important stations from the originating station to the terminating station in one table only. Users have, therefore, need not refer to several tables to find out the schedule of a particular train. Main points of information for passengers are also given.
2. **Zonal Timetable** - This timetable is published annually by each of the zonal railways. In addition to the train timings, there is additional information, which is useful for the passengers. This mainly relates to rules regarding reservations, refunds, and cancellations of confirmed booking, fare tables and other facilities, which Railway administrations provide for the convenience of passengers. Copies of these timetables are available for sale at the booking offices and book stalls.
3. **Military Timetable**- This timetable is not made available for general public. Defence are one of very big users of rail infrastructure and a number of special trains for Defence are run by Railways. In order that these trains can be run at short notice, we have detailed timings of such trains worked out, which are also revised along

with revision in the public timetables from time to time. These timings are kept secret.

For Railway staff

1. **Staff copy of public timetable** -Train timings portion of zonal timetable, without the additional pages for guidance of passengers and advertisements, is bound and copies given to staff dealing with passengers for their guidance.
2. **Working Timetable** -Large amount of information is required to be conveyed to the railway staff connected with running of trains and maintenance of the infrastructure on the railways. They must not only know the times of the trains but also a lot of information about the track, signals and other facilities and this information is conveyed to the staff through the working timetables. These timetables are printed division wise, and it is desirable for all railway officers to familiarize themselves with these timetables.
3. **Graphic Timetables** -These timetables are in graph form and are prepared for the guidance of the Control staff. These timetables are prepared section-wise, indicating over a graph not only Mail, Express and Passenger trains, but also Goods trains that can run for 24 hours. These are also called '**Master Charts**'. These are generally displayed in front of the Section Controllers in their cabins, so that they can

constantly relate actual running of trains to the fixed schedules laid down in the timetables.

10.3 Process of Preparing Timetables

The process of time tabling is long drawn. Initially, suggestions are called from members of Divisional Railway Users' Consultative Committees (DRUCUs), Passenger Associations and other rail-users and public representatives of that area. All proposals are studied and cross-checked with availability of the resources like path, locomotives, coaches, terminal capacity and maintenance requirement at divisional level. If the proposals are sound and there is possibility of garnering more revenue for the railway then these proposals are sent to headquarters with approval of divisional railway manager.

At Zonal Headquarter, all proposals are examined further and if found feasible then approved by General Manager and sent to Railway Board. The coordinating authority of time tabling is Chief Passenger Traffic Manager (CPTM).

The Railway Board examines all proposals and holds an Inter-Railway Timetable Coordination Meeting and same is convened by Principal Executive Director (Coaching), Railway Board. All proposals are discussed among Zonal Railways if trains are to be run across other Zonal Railways. If consent is given, then Railway Board would agree to the running of such train.

During this meeting, introduction of new trains, diversion of trains, extension of trains, increase in frequency of trains, augmentation of trains and stoppages are discussed and agreed. The proposal agreed in timetable coordination meeting conveyed by Railway Board through notification before start of any train.

10.4 Factors to be kept in mind while framing timetables.

The Time Tabling of passengers carrying trains is a very intricate and complicated process as it involves several stack-holders. At

one place, it has to take into account of passenger's requirements and preferences while on other hand it require the path, coaches, locos, etc. as well as other aspects of the railway operation. The railway operation is dynamic process, and the Time Tabling require to do at least once a year for following reasons: -

a) Increasing demands of passengers due to a developing economy and increasing population. Every year a number of additional regular passenger trains are introduced.
b) Due to technological advancement, trains are getting speeded up through electrification, doubling or tripling or construction of bypass and improvement in signalling.
c) Introduction of new types of rakes, self-powered multiple units, better locomotives, etc.

At present, timetables are generally revised and issued once a year, preferably every Ist July. However, where monsoons are frequent then there are two-time tables one for rainy seasons and other for normal seasons. Following factors are taken into consideration while making timetable.

A. Requirements of passengers and their preferences.
B. Service requirements of Railways.

A. Requirement of Passengers and their Preferences

There are certain requirements of passengers depending upon the type of passenger category. Some of the requirements are as under:

1. **Suburban & Suburban like passengers: -**

The passengers of sub-urban areas always like to travel to cities and metropolitan towns, especially to Central Business Districts (CBD) during office time in morning and return in the evening to their sub-urban towns. These trains are now more in demand and necessity also.

Passenger association always asks for more such trains.

2. **Medium Distance (300 to 500kms) Inter-city passengers:** Superfast day time trains such as Shatabadi or Vande Bharat Express trains between New Delhi –Kanpur-Lucknow or New Delhi – Bhopal caters to the intercity passengers. These trains are quite popular as these trains are used by business travelers.
3. **Long Distance Express train: -**
   Overnight Journey without wasting a working day is preferred like Rajdhani Express trains between New Delhi & Bombay and New Delhi and Calcutta. These trains are popular and large number of passengers would naturally prefer fast trains with fewer halts.
4. **Other requirements of passengers: -**
   The other requirement of passengers includes as under:
   a) Convenient arrivals and departures at terminals and important intermediate stations.
   b) Appropriate meal halts.
   c) Proper connections with branch line trains at junction stations.
   d) Adequate halts at intermediate stations for entraining and detraining.
   e) Comfortable coach and better riding.

B) Service Requirements of railways:

The service requirement consists of several maintenance and infrastructural factors. Some of the factors are as under:

1. **Realistic running times between stations:**
   These timings are now generally being determined through computer simulation in the RDSO Lucknow. For departmental use, Minimum and Normal Running times are stipulated for each block section for each train.
   Minimum Running Time (MRT) is calculated at

'Maximum permissible Speed'. While Normal Running Time (NRT) is calculated at 'Booked Speed' which is generally 90% of the Maximum permissible Speed.

Due allowance is made in MRT and NRT for permanent speed restrictions. When a train is running late the driver can make up time equal to (NRT-MRT), except in thick & foggy weather & cautious driving.

2. **Time Allowances for crossings and precedence:**
   These are calculated by preparing Master Charts which are time distance graphs indicating the paths of all passengers carrying trains & nominated important freight trains.
3. **Availability of platforms and other terminal facilities:** Platform facilities at terminals and other important stations.
4. **Maintenance allowance:**
   Engineering Allowances for maintenance of track.
5. **Loco allowance:**
   Time allowances for shunting, if required for attaching/detaching locomotives or slip coaches etc.
6. **Traffic allowance:**
   Time required for crew changing.
7. Time required for fueling locomotives at nominated stations.
8. Time required for carriage watering/cleaning.
9. Meal halts.
10. Time required for loading/unloading of parcels/luggage.
11. Recovery time: These are provided short of important junction stations and terminals to make up time in case of any unforeseen delays.
12. **Change of locomotives** - Locomotives required to be changed either at places where traction changes or at stations where loco shed is located and locomotives are required to go to the shed as per the loco link.

13. **Loading/unloading of parcels/luggage** - Stations having lot of luggage of passengers and parcels are also required to be provided with additional time to permit loading/unloading.
14. **Staff requirement** - There is a limited time up to which railway staff is expected to perform their duties. They have, therefore, to take over and make over their charge at fixed locations. A bit of additional time is provided for the staff to examine the equipment and documents etc., being taken over.
15. **Unforeseen circumstances** - There are a number of circumstances like signal failure, alarm chain pulling, occasional failures for which provision has to be kept. If no provision for such eventualities is kept, it is likely that the trains may run late frequently. This is generally up to the maximum of 3% of the total running time and is called 'traffic recovery time' and is provided short of big junctions, divisional/zonal interchange points. It may, however, be noted that in actual practice on most of the railways very little traffic recovery time is available.



PUNCTUALITY OF TRAINS AND HOW TO MAINTAIN IT

11

The most important indicator of any passenger transport system is its maintenance of punctuality of the services. It is a sold index, which decide overall working of passenger operation. Any drop in punctuality parameter is reflection on efficiency of a railway administration. Therefore, it is the responsibility of every employee of the railway, whether they are maintaining asset or running the railway or in some way or other in railway operation to maintain punctual running of the trains. As we know that around 20 million passengers travel in over 10,500 trains per day on the Indian Railways. Any late running of trains not only results in colossal waste of time of the passengers but also causes great loss of goodwill of the Railways. Punctual running of trains is, therefore, one of the most important aspects of railway operation.

Punctuality is simply defined as the train must run on pre-advertised time and duration of the travel for the passengers must be minimum. Sometime, punctuality is also a perception among the people about the services therefore, all effort be done to win confidence of the people and that is possible, if railways may run trains on right time

consistently.

11.1 Perspective of passengers about punctuality

Perspective of passengers is greatly depending on how a passenger train is running, controlled and governed by timings mentioned in public timetable. Accordingly, the passengers want and wishes the train shall and must arrive and depart asper these published timings. The arrival and departure of the train must not only limit to originating and destination stations but maintain punctuality at intermediate station also. The waiting for a train at a railway station is generally upset the mood of passengers and they become restless and start complaining. Therefore, punctual running of passenger carrying train is must for any railway administration.

11.2 Indian Railways perspective about punctuality

The concept of punctuality in the Indian Railways is not the same as that of a passenger. Train working is inherited with certain innate qualities. As such train being 'track bound' the freedom of movement is possessed with certain limitations. In the case of railway, a train is said to be punctual when it reaches its destination as per the arrival time given in Public Timetable (PTT). It might not have arrived/departed from intermediate stations according to the mentioned timings. Railways also wish passengers perception of punctuality to be fulfilled, but in actual working and in practice. It may not be possible due to its uniqueness in working.

Not losing time (NLT) concept:

The concept of Not Losing Time (NLT) is unique with Indian Railways as trains are running from one end of a country to another covering a network of more than 68,000 route kms traversing through sixteen zonal railways and many divisions. Separate zonal railways setup is available for each zone/division and efficiency in working is judged through such unit-wise.

A late running of a train in one railway/division due to any reason cannot be accounted in another one's performance. The receiving railway/division cannot be forced to accept the responsibility for late reception. The reasons for unpunctual running may be genuine or in genuine. It is unwise and undemocratic to blame another railway/division for delayed running of the train over another one. Under these circumstances, a concept of not losing time has evolved.

This means, if a train is taken over by a railway/division from another railway/division with a late arrival of say 15 minutes and if it continues to run with the same late and handed over to another railway/division with same 15 minutes or may be earlier also, then as far as this railway/division is concerned the train has not lost any time further and said to be punctual. This concept is known as 'NOT LOSING TIME'. In case if the train is handed over by 20 minutes late, then it is derived that the train has lost punctuality only by 5 minutes.

11.3 Calculation of punctuality

Punctuality is calculated for train wise (Mail, Express, passenger, suburban) and gauge-wise. The formula is expressed in percentage. Targets are fixed for Zonal railways. Punctuality statistics are maintained for trains reaching destinations at right time. Punctuality statistics on Division / Railway is also maintained, so that trains are not late over a particular Division / Railway.

Formula:

$$\text{Punctuality} = \frac{\text{No. of Trains running RT* + No. of trains NLT**}}{\text{Total No. of Passenger Trains}} \times 100$$

***RT- Right Time**

****NLT- Not Losing Time**

11.4 Factors Affecting Punctuality

The running of trains is a coordinated efforts of various departments in railways as engineering department maintain track, bridges, and other assets while signal department maintain signals, electrical department maintain OHE and mechanical or electrical department provide locomotives and coaches. Any non-conformities may lead to detention of the train and loss of punctuality.

The important factors, which effect punctuality are categories as under department wise:

Operating Department:

The operating department, which is responsible for maintaining punctuality of the train may lead to detention. Therefore, it is necessary to ensure that followings should not be the cause of detention as under:

1. Faulty time tabling of the passenger carrying trains.
2. Bad controlling on part of traffic controller specially misjudgement in precedence, crossing and running of slow-moving trains like goods train ahead of mail express train.
3. Late placement of rakes on platform at train originating stations.
4. Taking Extra time in shunting, loading & unloading parcels, fuelling and watering.
5. The signals are not taken off in time especially to run through trains.
6. Delay in reception and despatch of train.
7. Delay by Station staff in asking, giving & handing over to the Authority to proceed to Loco Pilots (LPs).
8. To maintain connection with other trains arriving late.
9. Late start of trains on account of train manager.
10. Defective rake links.
11. Extra time at roadside station for shunting if some coaches are being attached or detached.

12. Improper planning at terminal facilities.
13. Wrong Marshalling of the train.
14. Defective links of crew (Loco pilot and Train Manager links).

Commercial Department

1. Reservation charts must be prepared in time and displayed. Now a days passengers are to be communicated on their mobile phone at time and if detention of the trains same to be informed through electronic means (Software).
2. The meals must be served without causing any detention to train.
3. Loading/unloading of parcels/luggage should be completed within allowed time.
4. Special checks should be conducted to eradicate Alarm Chain pulling and curve menace of unauthorized catering and vending.
5. Inadequate laborers for the work of loading and unloading work.
6. Insufficient halt for loading and unloading of packages.
7. Prevent overcrowding by way of running extra train or augmentation of coaches.

Mechanical Department

1. Proper maintenance of coaches so that they are not marked sick at the starting station or en-route. Vacuum or Air-brake system, as the case may be, should be maintained efficiently.
2. Carriage and Wagon examination and carriage watering wherever required, must be done within allowed time.
3. Prevention of Hot Axle / Flat tyre in coaches.
4. Timely watering of the train.
5. Fueling of generator car and attention of coaches if there is some defect.

6. Timely cleaning of toilets or coaches if the station is clean train station.
7. Removing of C&W Board in time if loco is change or maintenance of coaches.

Electrical Department

1. Proper maintenance of locos so that there are no detentions due to locomotive failures.
2. Locomotives should be turned out punctually from the loco sheds.
3. Drivers should be suitably trained, monitored and motivated to ensure they do not waste time and make up time as per rules when running late.
4. Proper maintenance of train lighting.
5. proper maintenance of air-conditioned coaches.
6. Proper maintenance of overhead Equipment (OHE) on electrified sections.
7. Ensuring assured power supply.
8. Defective lights and fans in trains resulting ACP by the passengers.
9. Tripping / failure of OHE.
10. Failure of electrical water pump.
11. Failure of Head light of the engine or bad focusing.
12. Bursting of Power Blocks & Power +Traffic Blocks.

Signal and Telecommunication Department

1. Proper maintenance of points and signals.
2. Proper maintenance of telecommunication facilities including Block Instruments.
3. Prompt action in case there is any failure of Points, track, signalling or interlocking and telecom.
4. Failure of means of line clear working i.e. Block Instrument / Block Telephone etc.
5. Failure of Control telephones.

6. Non availability of signal maintenance staff at railway stations. (ESM, MSM, TCM)

Civil Engineering Department

1. To ensure minimum speed restrictions and cautions driving. Time loss on this account should not exceed total 'Engineering Allowance' time provided in the timetable.
2. Whenever 'engineering blocks' are taken for track repair/maintenance, the work should be completed within allotted time and prevent bursting of Engineering maintenance blocks.
3. Working of dip-lorries in the face of fast mail/express trains should be avoided.
4. For speeding up trains, long term measures should be taken to remove permanent speed restrictions as far as possible.
5. It should be ensured that caution orders are issued to Drivers only when required. It sometimes happens that caution orders continue to be issued even after speed restrictions has been removed due to lack of communication between engineering officials and station staff.
6. Excessive Engineering speed restriction. (Over and above the Engineering Allowance)
7. Stopping of trains on banner flags or by showing danger signals by engineering staff.
8. Rail breakage, lurch felt by loco pilot.
9. Improper track patrolling.

11.5 Action by Administration to Maintain Punctuality

A coordinated effort by all departments concerned led by the Divisional Railway Manager (DRM) himself is imperative to maintain punctuality.

Proper information system

1. A punctuality register is maintained in the control office

wherein particulars of detentions to passenger carrying trains are recorded daily. Departmental Executive officers must make it a point to scrutinize this register in the morning and take up cases of loss of time due to any shortcomings on the part of their department.

2. In addition, each departmental head must set up his own channel of communication to get information in real time for any serious detentions pertaining to his department. Section or Deputy Controllers should also inform telephonically bad cases to the officers concerned even if it happens at odd hours.
3. DRM generally has a visual indication board in his chamber which indicates how the mail express trains are running. If a train is running late the DRM may order the control to issue message from him to the Driver/Guard and station staff concerned to make up time.

11.6 Remedial measures to improve punctuality.

The improvement in punctuality can be achieved by adopting following measures:

1. Loco Pilots to run at MPS
2. Starting a train before allowed time when arrived late
3. Punctuality drives
4. Punctuality meeting
5. Monitoring of specified trains at specified level
6. Scrutiny of Control Charts/Drivers & Guards' Journals
7. Correction in timetable of trains
8. Foot Plate Inspections
9. Encouraging of Staff by way of punctuality awards
10. DRM's Meeting with Departmental Officers

1. Loco Pilots to run at Maximum Permissible Speed (MPS)

Loco Pilots are instructed to run at Maximum Permissible Speed (MPS) always. Earlier Loco Pilots used to run the trains at booked speed and in only case of late running, they were

authorized to run at MPS, to make up time. This has been dispensed with now, in order to reduce the pressure on Loco Pilots. In case of the late running of the trains, the pressure keep mounting on Loco Pilots as they are under tremendous stress to make up time. To avoid this extra strain, Loco Pilots are advised to run at MPS from starting station itself.

2. **Starting a train before allowed time when arrived late**

   At every station a specified time is given for stopping and re-starting. If a train arrived after the published departure in PTT, it may be started before the allowed time after ensuring all transactions are over.

   This measure is quite helpful in minimizing the late running of the train. On other hand, it is the responsibility of all those concerned staff to cooperate each other and ensure that the desired works are completed and carried out at the earliest and train started soon. It is mainly applicable to the parcels loading / unloading, any attaching/detaching of coaches and subsequent examination, preparing and handing over train related documents in time etc.

3. **Punctuality drives**

   Launching the punctuality drive is always helpful. To enhance and enlighten the efficiency of punctuality, at various levels punctuality drives must be conducted periodically.

   Recurring reasons for late running must be identified and instructions be issued for corrective action without delay.

   The staffs need to be counseled about punctual running of trains and habitual offenders need to be pulled up and punished. The awards must be given for good performer.

   Punctuality drives help in detecting any system defects such as poor visibility of signals, poor engineman ship, inadequate sighting distance of signals etc. Reports are made out at the appropriate levels and follow-up action must be initiated.

4. **Punctuality meeting**
   Punctuality meetings must be conducted at Zonal/divisional levels at the highest level. Reasons must be analyzed and directions are to be issued then and there without any delay.
5. **Monitoring of specified trains at specified level**
   It is observed that punctuality of some important trains is closely monitored at higher levels. Sometime, punctuality of such trains is also watched at the level of Hon'ble Minister/ Higher Board officials/General Managers Level, which helps in creating awareness among the staff on punctuality. Doing such action, the punctuality consciousness is developed in the minds of concerned railway men.
6. **Scrutiny of Control Charts/Drivers & Guards' Journals**
   The traffic and other officers must scrutinize a few control charts and journals daily to get better insight into train's running. The flaw on part of bad controlling must be highlighted and corrective action be taken.
7. **Correction in timetable of trains**
   If some particular train is losing punctuality more often than there is greater need to change the timetable to make it punctual, but it must be done after consultation of the passenger association and other user groups.
8. **Foot Plate Inspections**
   The conduction of Foot plates inspections by Branch officers of traffic, electrical, mechanical, signal and engineering department is quite useful. Occasional Foot Plating by DRMs and ADRMs is needed to spread the awareness about the punctual running of trains. When branch officers and DRMs & ADRMs do the foot plate inspection that not only include punctuality but also create safety consciousness amongst staff and gives a personal touch for motivating staff. Such inspections are also helpful in pinpointing the systemic flaws in

railway operation specially to detention and safe running of the trains.

9. **Encouraging of Staff by way of punctuality awards**
   Good performance by Loco pilots, Train Manager, station staff and staff of other departments must not go unnoticed. For good performances in making up time and maintaining punctuality, the cash awards must be given liberally by the DRMs and the same should be publicized through circulars, fortnightly gazettes etc. and even to local newspapers.
10. **DRM or ADRMs punctuality Meeting with Branch Officers**
    Every day, the DRMs or ADRMs must hold a punctuality meeting attended by all branch officers concerned to train operation to discuss reasons for detention of trains on previous day and remedial action taken. DRM may also hold a monthly meeting with officers where detailed cause wise analysis of detentions is done and medium- and long-term remedial measures are decided upon. These meetings are quite helpful in improving punctuality on a division.

The punctual running of trains is not the job of one department or individual's affair. It reflects the total outcome of a divisional or zonal team. It can be a good example of teamwork to ensure punctual running of trains and achieve highest percentage of punctuality.

All departments must work in tandem to achieve punctuality. A train might have traveled 500 Km punctually and only 05 Km may be left to reach the destination. A failure on the part of man or material at this stage may force the train to reach the destination late. All good efforts put up by many quarters so far for 500 Km will go waste due to failure of somebody or something.

If some division is maintaining good punctuality that means all parameters of coaching operation and also freight operation would be excellent. It is seen punctual running of passenger trains directly

positively affect freight operation as a greater number of freight trains can be run in corridors created by coaching trains and there will be ample time for track, OHE and signal maintenance. The concerted efforts and cohesiveness in working is the need of the hour. In a world of competitiveness among various transport modes, punctuality plays a prominent role in passenger train operation. Once railway man makes punctuality as a way of life, then the commons will be in cloud nine and Railways will be in the seventh heaven.

11.7 Monitoring of punctuality at Zonal Headquarters level

The Chief Passenger Traffic Manger (CPTM) is the officer in zonal headquarter, who coordinates and monitors passenger operation on the zone. He takes up the cases of detentions of the trains every day with the Divisional officers concerned. General Mangers or Additional General Managers are also generally hold meetings every day or twice a week or once a week as per convention and need with the departmental heads of the whole department to discuss bad cases of detention and take remedial measures. The information about passenger trains operation is collected from divisions round the clock by Emergency Cell on each Zonal Headquarters.

11.8 Railway Board's level

Principal Executive Director (Coaching) coordinates and monitors the passenger train operations at the Railway Board's level. A 'Punctuality Cell' functions in the Railway Board's office round the clock. Detentions to important trains are scrutinized. The bad cases are discussed with Additional Member (Traffic) or even with Member, Operation and Business Development. Some selected and very important trains are also designated as 'Ministers Trains' and these must be especially monitored.

INTEGRATED COACHING MANAGEMENT SYSTEMS (ICMS)

12

The COIS (Coaching Operations Information System) module provides detailed, real-time information for planning, executing, and monitoring the operations of passenger services. Since the system is aware of the plans, it requires minimal data input.

The CMM or Coach Maintenance Management module has been developed to facilitate and record maintenance of coaches and the management of spare parts inventory. It is fully integrated with the operations modules for generating alerts, interchange of information, request for placement of rolling stock for repairs, delivery, and acknowledgement of certification of coaches for service, etc.

The Punctuality Analysis and Monitoring (PAM) module of ICMS automatically picks up the delays from the Control Office Application (COA) and produces real-time insight into the state of the operations. The system provides consistent and accurate reports for all level of management, from the operative to the strategic. Since ICMS already has most of the related information, it is the

natural place to also monitor and analyse the punctual running of trains.

1.1 Modules In ICMS

1. **Punctuality Module (PAM):** For Post facto analysis of punctuality loss and its causes (not an on-line system), Captures train running at Originating/ Terminating and interchange points and the causes of detention. Data input predominantly at Divisional HQ level. Status: Implemented.
2. **Coaching Operations Information System (COIS):** Captures events on Coaches/Rakes, Generates Reports for Management of Coaching Stock. Data input predominantly at Station/Coaching Yard level. Status: Implemented.
3. **COIS Data Entry Module:** Support module of ICMS, to maintain database pertaining to the information of Rake Links, Yard Infrastructure, Coach Master, Train Schedules etc. Data input at Zonal HQ level. Status: Implemented.
4. **Coaching Maintenance Module:** To capture depot activities related to coaching maintenance operations, Utility tool for managers looking after mechanical and electrical maintenance, Includes module for Material Management and Manpower data (Gang strength per shifts etc), Data input at CDO level. Status: Under system study.
5. **Time-tabling Module:** For simulating the suitable timings for running of all kinds of trains, simulating the best available path for planning a train keeping in view all variables, simulating optimum utilization of rake link, generating all time-tabling documents. Data input at Zonal HQ level. Status: Under system study.

1. ICMS-System Architecture

a) User connects through browser interface (like Internet Explorer)
b) Separate URL for PAMS, COIS and DATA modules (for ex: http/…/cois, http…./pam , http/…/data and so on)
c) Users have thin clients at location.
d) Back-end: RDBMS (Oracle based)

2. ICMS-Data Feeding

a) **Master Data:** Common Master database for PAMs and COIS, includes Infrastructure data (of more permanent nature like List of Stations, Platforms, washing lines) and Other Master Data (of less permanent nature like Rake Link Data, Timetable data, Coach Master etc.)

b) **Running Data:** Separate and independent running database for PAMS and COIS

1. PAM:

1. Feeding mostly at divisional level, Interchange owning division controls the data feeding for handing over or taking over, Zonal client does the responsibility fixing (deciding the trains "lost in punctuality")
2. Activities include:
3. Originating terminating, interchange timings
4. Detention Reports,
5. Cause wise logging,
6. Fixing Responsibility

2. COIS: Unlike PAM - no concept of data "feeding" in COIS. Instead working on the system at station/yard level leads to generation of required data (and memos for the operator). This works as input for MIS.

All station/yard activities from arrival to departure of rake are captured:

Yard stock entry	Dispute Resolve
Yard Position	Sick Marking
Rake formation	Sick line Placement Sick line Operation
Modify consist	Shop Marking
Movement	Shop Placement
Movement (Yard to yard)	Remove fit available coaches
Rake Examination	Search Feedbacks

Departure Reporting	Send Feedbacks
En route Attachments/ Detachments	Generate memo
Arrival Reporting	

c) ICMS-MIS-Reports

a) PAM: Reports for Management at Divisional Level, HQ level, Board level like:

1. Railway Punctuality Performance for a date for a division
2. Movement of Trains (Division wise) in a Zone
3. Punctuality percentage of Mail/Express
4. Cause wise/Gauge Wise breakup of Lost Trains between dates
5. Division wise analysis of Cause of Lost Trains on Date in a Zone
6. Railway Punctuality performance for a date in a Zone
7. Cause wise breakup of Trains lost in a period
8. Summary of Monitored trains daily Run and Lost
9. Section wise/Cause wise analysis for all trains on a date
10. Zone wise/Cause wise analysis for all trains on a date, etc

b) COIS: Reports for Management at Station Level, Divisional Level, HQ, RB level like:

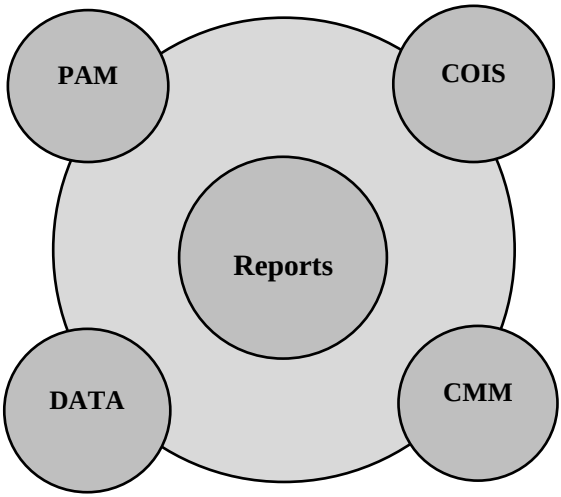
1. Yard Stock Position (Line position)
2. Vehicle Guidance
3. Zonal Stock Balance sheet (type wise details of Bare Requirement, allotment,
4. running in service, ineffective etc)
5. Coaches on way from/to shop
6. Foreign Railway Coaches
7. Ineffective Coaches
8. Coach History
9. Rake Link Information Zonal/Divisional Coaching Stock allotment/availability, etc.

12.2 Main aspects of Coaching operations

1. Running of Coaching Trains (Punctuality)

2. Coaching Stock Management
3. Timetabling

ICMS – Modules



Control Office Application (COA)

Train operations on the Indian Railways are controlled and monitored by the Control Rooms in each of the seventy-seven divisional/ area control offices. The Control Room is the nerve centre of the division. COA is a 24X7 application. It has changed the way the trains are monitored as train movements are captured in real time and movement of scheduled and unscheduled trains planned and controlled through the computer aided interface.

Data- Data Entry Module

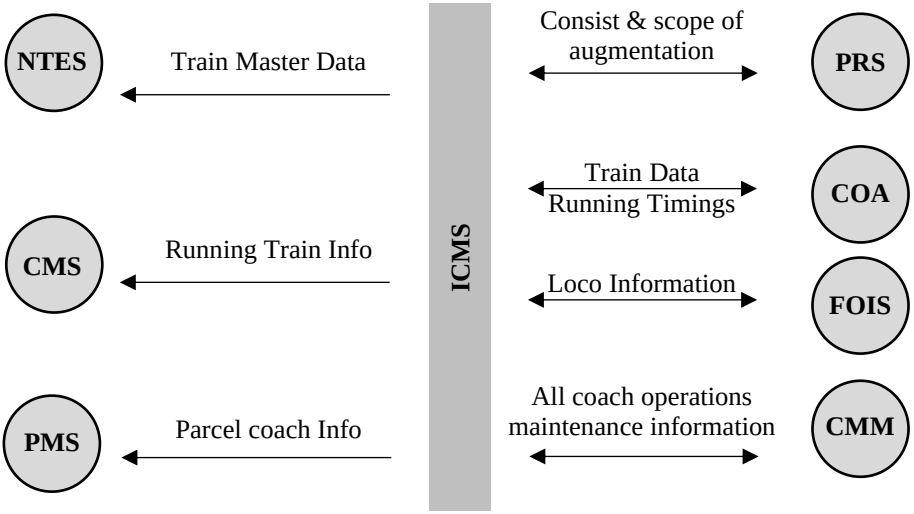
1. Managing all the master data of Coaches and Trains.
   a) Train Profiles
   b) Train Schedules
   c) Rake Links
   d) Rake Consists

2. Train time tabling (WTT and PTT), publishing to other systems like NTES, COA, CMS etc.

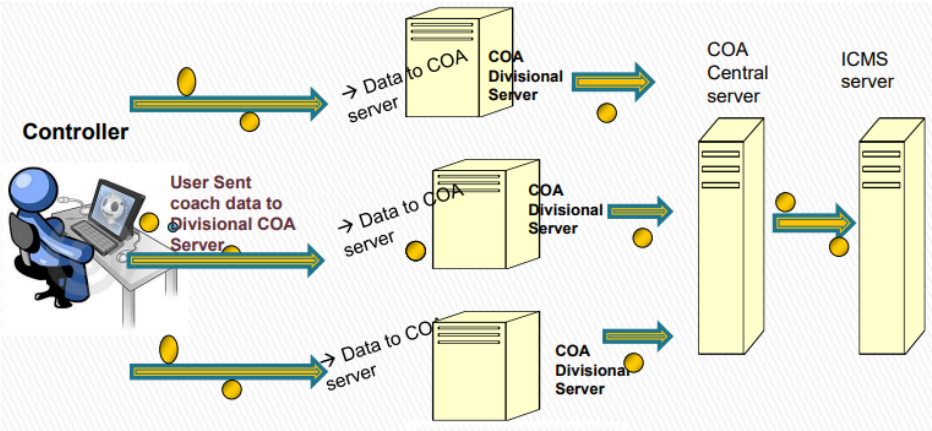
Punctuality Analysis and Monitoring (PAM)

1. Automated, real-time reports based on COA feed, and
2. Punctuality related activities integrated into a workflow

Integration Amongst Systems



COA to PAM Data Flow



PAM Module

1. Centralized web-based application accessible from Division, Zone, and Railway Board level.
2. Monitoring Punctuality of all Passenger Carrying Trains Over Indian Railways at all levels.
3. Capturing train running timings and delays with its detention details.
4. Based on data captured from such sources, system generates various types of analytical and critical reports at all levels.

12.3 Coaching Operations Information System (COIS)

Centralized Web based application for Coaching Stock management.

1. Rake operations.
2. Coach Operations.
3. Loco operations in passenger service.
4. Shop operations.
5. Sick operations.
6. Coach Census

Benefits – manifolds

1. A number of MIS Reports in PAM & COIS regarding train running, coach movements etc.
2. Better monitoring of train running & optimum utilisation of coaching stock
3. Census through system
4. Planning in advance
5. Replacement of manual reports – transparency & effectiveness

12.4 National Train Enquiry System (NTES)

National Train Enquiry System is a nationwide integrated on-line information system for providing updated information regarding expected/actual arrival/departure of passenger carrying trains and other details to the public/rail passengers. Information made available to public through-

1. Display Boards at stations

2. Face to Face Enquiry counters at stations
3. Internet - Web interface (http://enquiry.indianrail.gov.in) and Mobile Apps
4. Indian Railway Enquiry Call Centres (139)

12.5 Integrated Coaching Management System

Challenges

1. Online Punctuality Analysis & Monitoring.
2. Online asset failure reporting and analysis.
3. Online analysis of coach holding and its utilization for better decision making and utilization
4. Maintenance of Train Master over Indian Railways to avoid duplicity.

   To provide support to the entire gamut of coaching operations through digitalization.

Goals

1. Online monitoring and reporting of Punctuality performance of passenger carrying trains.
2. Digitalization of all operational activities related to Locomotives, Coaches and Rakes.
3. Seamless Integration with train operation applications.
4. Centralized data entry and reporting.

   The objective has been to keep an integrated application framework which can seamlessly integrate with Control Office Application, Train Enquiry System, Freight Operations Information system, Reservation system, Coaching Maintenance Management, Train Scheduling system, Crew Management System, TTE Lobbies, etc.

Our Solution

1. PAM

Punctuality Analysis & Monitoring (PAM) module provides various functionalities and reports for monitoring the punctuality performance of passenger carrying trains.

2. **COIS**
   Coaching Operations Information System (COIS) module supports all operational activities related to passenger Coaches and Rakes.
3. **Utility & Mail**
   Utility application facilitates the user in submitting feedback, ICMS user management (add/modify/delete user) etc. Separate mailing facility has also been provided to facilitate communication among ICMS users.
4. **Passenger Loco Module**
   This module captures all operational activities of locos under passenger service. Zonal and Divisional power controllers are users of this module. Loco module is integrated with FOIS (Freight Operation Information System) for Shed-In/Shed-out and Service exchange (Passenger -> Goods & Goods-> Passenger) to provide integrated position of locos running under Passenger and Goods services in near real time.
5. **MIS Reports**
   This module provides various kinds of reports related to all ICMS modules such as master data reports, monitoring reports, user performance reports, historical reports, analytical reports, utility report, etc. Reports are provided for all user levels for monitoring, analysis and early decision making under various heads e.g., Detention, Asset Failure, COA reports, Loco reports, Stock reports etc.
6. **Integration service**
   Integrated Coaching Management System (ICMS) modules are integrated with following important Systems of IR:-
   1) COA (Control Office Application)
   2) NTES (National Train Enquiry System)

3) FOIS (Freight Operations Information system)
4) PRS (Passenger Reservation system)
5) CMM (Coaching Maintenance Management)
6) SATSaNG (Software Aided Train Scheduling and Network Governance)
7) CMS (Crew Management System)
8) PMS (Parcel Management System)
9) CTTL (Computerisation of TTE Lobby)

Benefits

1. Improved Accuracy

1. Single point of Data entry
2. Single point centralized reporting.
3. Trend analysis of past years can be done for improvement in train running.
4. The Caution order is printed through system instead of Manual caution order.

2. Automation

1. Accurate coach reporting.
2. Automated System generated VG.
3. Automation of the process of sending actual coach number to PRS for display in charts.
4. Improved Passenger Loco reporting.
5. Online FTR Train(s) / Coach(es) booking.

3. Timetable Integration & Distribution

1. Reduced efforts in Time-Tabling activity.
2. Automatic generation of tentative routes by system.
3. Uniform non-reduntant Train master data management.

FREIGHT TRAIN OPERATION

13

The freight business is the major source of revenue for the Indian Railway. Main activity centers of Freight operation include terminals, yards, control office and stations.

13.1 Broad Classification of Goods Trains:

1. **End to End:** Trains, generally run from the train-originating Terminal to the destination. This is an express stream of freight trains and does not require any stoppage enroute, except for crew change. Such trains will normally include container trains, air braked block rakes for single destination. These trains are planned to run like non-stop Rajdhani trains and may have a fixed timetable and guaranteed transit time. This group may include trains of private freight operators. Other through trains also block rakes or may have two or more destinations on the same or adjacent section. These may have conventional bogie stock.
2. **Work Trains, Shunting Trains, Pilots etc.:** These train movements are for short distances for clearance of damaged wagons made fit or for supply/removal of rakes to and from

the sidings or important terminals served by a yard.

3. **Departmental trains:** These include Material Trains, Track maintenance trains, Ballast trains, Relief Trains, Wiring Special, Crane Specials etc. are known as departmental trains.

13.2 Complexity of Freight operations:

Freight operation is generally more complex than passenger train operations for the following reasons:

1. The changing pattern and fluctuations in demand for rakes/wagons due to changes in the level of production, changes in the pattern of distribution and changes in demand at consumption centers.
2. The variety of commodities to be moved, with different characteristics & type of wagons required.
3. Preferential traffic schedules, rationalization scheme& other public policy regulations.
    a) Seasonal variations in demand.
    b) Time taken in loading/unloading–whether manual or mechanical.
    c) Train examination Systems.
    d) End to End/Intensive Examination.
    e) Premium end to end.
    f) Closed Circuit rake.

    This in turn results in Sick Wagon detachments and attachment of fit wagons for completing the rake composition.
4. Following is the series of operations for empty rakes being offered for loading:
    a) Examination.
    b) Supply/placement.
    c) Loading.
    d) Dispatch.

5. For inward loaded trains which after placement and release must be back loaded at the same terminal or at other location, withdrawal from loading points may require an outward examination unless the rake is fit for round trip or for a prescribed distance. Once the train is fit in all respects and commercial formalities have been complete a set of activities are initiated, these include.
   a) Preparation of train documents.
   b) Train ordering.
   c) Arranging train crew & locomotive.
   d) Monitoring train movement.
   e) Arrival at the destination.

   This cyclic operation requires constant monitoring and co-ordination.

Ordering of Goods Train:

a. Each freight Train is required to be ordered to run under a unique number or name or Train ID for monitoring its movement through intermediate divisions, zones etc. and to facilitate all processes at control offices, yards, C&W depots, stations, and Crew/Guard booking Lobbies and involve Power Controller/Traction Loco Controller.
b. The message from Divisional Control that a train is scheduled to leave from a Station or Yard at a certain time is known as the Train Notice. The message is, in turn further conveyed to all concerned. The availability of suitable (i) Load (ii) Locomotive (iii) Crew/Guard and (iv) Path must be kept in view for ordering of goods trains.
c. Co-ordination between the Traffic Controller/and the Power Controller (the shed, if fresh power is required); the Yard/Station, C&W staff and the Crew/Guard booking lobby is thus required.
d. Regular conference with yards, terminals, and the adjoining

Division is held by the Control and for exchange of information regarding forecast of trains in yards; completion of loading/unloading at sidings etc. and interchange with adjoining Divisions. This monitoring should be enforced through FOIS so that time of staff spent on phone is reduced and more productive work is done by better planning.

e. Constant monitoring for expediting loading/unloading at major sidings/goods sheds is also done by Control and the Station Staff for ensuring the availability of load.

Planning of Locomotives:

a. **Power Plan:** The power plan indicates the daily average number of locos required and planned for freight services section wise for each division. This bare requirement of Locos for Traffic use is calculated based on the traffic turn round and average number of trains run on each section. This represents the average number of locos needed on the Division.

b. **Loco Outage and Loco Utilization:** Loco Outage means the average number of locos available to traffic use in a day (24 hours). Since the Diesel and Electric Locos have long extended runs and may cover many divisions in a day, the position may be maintained graphically for the entire duration (0 to 24 hours) the loco is online in the Division. Different colour graphic representation on Bar Chart can represent the time spent by each Loco to serve as a good Management Information System e.g. (a) time taken by running train (b) time taken for crew changing (c) time for fuelling (Diesel Locos) (d) time taken for loco inspection (e) time for repairs online(f) time for Light Engine running (g) time taken for shunting (h) time spent at terminal/ destination (i) enroute detention. Thus, the total hours for which the various Locos were available for Traffic use divided by 24 (number of hours in a day) would give the Loco outage.

$$\text{Loco Outage} = \frac{\text{Engine Hours for traffic use}}{24}$$

Loco outage can be prepared service-wise/ shed-wise/railway-wise, traction wise etc. The actual Loco outage should generally be around the target fixed for each Division. However, it should be appreciated that while the target is based on average, the actual requirement of Locos may fluctuate due to bunching of trains, increase in traffic or due to bottlenecks on account of operational reasons, equipment failure or after effect of interruption to traffic.

c. **Control of Operating Department on Loco running:** Electric and Diesel Locos are maintained by the respective Loco Sheds and Locos once turned out of shed are available for utilization for several days till prescribed maintenance/inspection schedule is due in the shed or the locos require out of course repairs. Thus, while the operating staff has the operational control over utilization of Locos as well as flexibility of using the Locos as per operational requirement, they must also keep watch over the maintenance/inspection schedules of the Locos and send the Locos to the Shed well in time. Overdue running of locos should be avoided by suitably planning their disposal towards respective sheds. Similarly, all out efforts should be made to send the dead locos or locos requiring attention in the home shed. The hauling capacity of the Locos and special restrictions as jointly agreed to by the officers of operations and loco departments should also be adhered to. While operating department must optimize the work done by each Loco i.e., moving maximum traffic with the minimum number of Locos, by adoption of operational strategies and improving efficiency. The Shed and the Loco organization

should provide optimum number of Locos in good fettle, keeping in view the traffic needs as shortage of Locos can lead to transport bottlenecks and inability to move the existing and potential traffic, along with the availability, reliability, safety, and predictability must be aimed. Loco failures, Loco troubles enroute and ineffective locos should be kept to the bare minimum. Balancing of Locos is also required to be done i.e., Locos without loads may be sent to other Divisions where they are required. Reduction in terminal detentions and increasing average speed of goods trains would substantially improve engine utilization.

d. **Availability of Engine Crew and Guard:** Running staff for Goods operations are generally booked on the principle of first in and first out, Balancing of Crews/Guards by sending staff spare is also required to be done in case the running of trains is not even in both directions on a section.

e. **Availability of Path:** Theoretically, on a double line section, a Goods Train can always be run when load, power and crew are available, and the next block section is clear. On single line sections dispatching a train out of path, will be counterproductive, due to Mail/Express Blocks, Peak timings of Suburban or Commuter traffic. Readiness of the interchange point or the terminal to accept the trains are to be kept in view before pushing a goods train ahead. It is better to have directional flow if possible. Master Charts incorporating all Passenger carrying trains and realistic goods train paths are prepared in consultation with Operating Officers, Controllers, Yard Staff, Power Controller, Station Masters of important stations etc. to:

   1. Find out line capacity of the section.

   2. To highlight the set of suitable paths for guidance of Control, which can be used for, goods train ordering

also.

3. To prepare tentative goods train timetable for selected express stream of trains.

f. **Lobby System:** A Lobby is like a Control Office in the field. It is established with the twin aim of reducing engine detention and crew detention in a Yard or a Crew or engine changing station by realistic ordering of trains and Crew/Guard booking. It is advantageous to have a combined Crew and Guard booking lobby so that both are available simultaneously. The lobby supervisors/staff can take forecasts of a train running from the Deputy Controller/Section Controller along with details regarding the names of Crew, Guard, and their signing-in time, loco particulars, last C&W examination etc. They can verify the dates of Loco Schedules from the Chart available with them and keep liaison with the Power Controller/TLC. They also keep watch on "expect" of train formation, examination, readiness etc. and by constant chasing, planning, and updating of information, trains are ordered unrealistic expect, Trains may be put back or cancelled, if required and Crew booking, and engine allocation changed promptly. Some overlapping Crew/Guard may also be kept in the Lobby to take care of the last-minute absenteeism. Shunters may also be kept in the Lobby of big yards/junctions to attach, detach, and run round locos or to pull the Train from Yards up to the Crew changing points, to avoid wastage of mainline Loco pilots. The pre-departure detention to the Crew, Crew hours balancing, rescheduling of Locos and Yard detentions to Locos can be thoroughly monitored by the Lobby and remedial measures taken.

13.3 Role of Various Agencies in Freight Operation:

Large number of agencies play important role in freight operation.

Marshalling Yards, Train Examination, Locomotives and Lobbies have been discussed elsewhere in this Manual. Role of a few agencies is discussed below with special reference to freight operations.

1. **Control Office:** The main function of the Control Office is planning, execution and review with all the three activities going on simultaneously.
2. **Planning is aimed at forecasting and optimizing the following:**
   a) Interchange.
   b) Trains to be run section-wise.
   c) Supply of rakes/ for bulk loading.
   d) Release of inward loaded rakes placed for Unloading.
   Information regarding the following items is generally required for this purpose:
   e) Analysis of divisional wagon holding.
   f) Power availability.
   g) Availability of loads.
   h) Disposal of empty rakes.
   i) Demands for loading.

   The plan is made by Control in the early hours of morning and reviewed by Operating Officers. Changes in the plan, as deemed necessary are made at various stages based on updated information received from the activity centers, adjacent divisions and instructions received from the Head Quarters.
3. **Execution:** The goods operation plan is executed based on actual materialization. of the forecast with suitable adjustments made for short falls /excesses. Yards, Loco Sheds, Stations, Terminals, Lobbies and TXR depots are actively involved in execution of the plan.
4. **Review:** The trend of the day's position is reviewed by the

Chief Controllers and Officers in the afternoon. Detailed review of the previous day's performance is carried out early in the morning by the Operating Officers with the following objectives:

a) Analyzing shortfalls of previous day to take remedial measures and pin-point weak spots.
b) Provide data for planning for the current day.
c) The main features of performance, which can be reviewed, include:
d) Interchange failures.
e) Divisional Wagon Balance (Wagons on Division).
f) Train Running.
g) Disposition of empties.
h) Loading at important terminals – and in case of shortfall, reason for the same.
i) Review of unusual occurrences.
j) Examination of Control Charts.
k) Particulars of stabled loads.
l) Yard performance.
m) Unloading on Division.
n) Registrations and Loading.
o) Power position, utilization of Locos & Terminal detention.
p) Sick line working.
q) Special type of stock.
r) Clearance of piecemeal wagons (sick or otherwise) from roadside stations.

13.4 Head Quarter's Role in Freight Operations:

The Division's Freight Operations generally require close co-ordination and assistance from other Division sand Railways. While direct contact is also maintained by the Control and Operating Officers of various Divisions, the Zonal Head Quarters

play a pivotal role in this respect. Some of the functions performed by the Head Quarters are summarized below:

Management Information System:

1. Important information concerning the position of Freight Operations on various Divisions of Railways is obtained through line and stock report daily telephonically or through FOIS or Teleprinter or FAX to the Head Quarters (Central Control) from Divisional Control. Now more and more zones and Railway Board are shifting to FOIS generated reports. This includes, loading and stock position, particulars of old outstanding and fresh registration of indents, category wise position of unloading, transshipment, Yard balances, important yards, and wagons on Divisions, Train Running on each section, average speed, interchange position, Locomotive position, and Locomotive utilization etc. The position is reviewed and analyzed by the PCOM/CFTM/ Dy.COM (Goods), STM (Goods), CMPE(R&L) and CELE. The important operational items/position pertaining to various Departments are conveyed to the Departments concerned as well as the General Manager. The Head Quarter Office also obtains the Statements at the end of each month or whenever required, and the performance is compared with (i) The Targets (ii) The figures of the previous month (iii) The figures of the corresponding month of the previous year and (iv) the best record etc. In addition, the Statistical Branch also provides Data to the General Manager and the Departments concerned for detailed analysis and review.
2. Head Quarters plays an important part in planning and coordination freight operations. After detailed conference with the Operating Officers, and in terms of Railway Boards

current-operating directives Head Quarters issues directions and instructions regarding the following items:

a. Interchange transactions (category wise)
b. Loading and Unloading
c. Traffic insight from other Railways/Divisions This information is now available on FOIS terminal where a pipeline can be seen from end to end and expected arrival of train at destination is also estimated by FOIS system**.**
d. Conveying priorities for the day and setting quantified objectives to be achieved.
e. Reviewing the work done at the important activity centers like Yards, Terminals etc.
f. Train and Traffic regulation in case of accidents etc.
g. Certain items of Goods Operation are directly controlled by Head Quarters e.g., Coordination and directions regarding rake Loading of programmed and committed traffic, movement of special type of stock, movement of over dimensioned consignments, out of turn allotments and allotments despite restrictions etc.

13.5 Railway Board's Control on Freight Operations:

The Railway Board provides Unity of Control and direction for the freight operations. It also has the important role of supervision and co-ordination, which is very much essential for a big network like Indian Railways. The Railway Board's Control Office also remains in contact with the Head Quarter (Central Controls) of the Zonal Head Quarters and watches loading and movement of important streams of traffic, like coal, raw material for steel plants (iron ore), cement, food grains, fertilizers, POL, sugar, export ores, container traffic etc. It also watches loading, interchange, power position, goods train running on important sections etc. to ensure that each Railway fulfils its obligation and optimizes the use of various assets. The items watched are the same as those watched by the Zonal Head Quarters in Respect of the Divisions,

but the perspective is wider. The Railway Board plays an important coordination role between various Railways and other Central Government Departments and vital sectors of Economy connected with Railways. Policy formulation and Planning, which have an important bearing on Freight Operations is also the major function of the Railway board.

Role of Some Other Departments:

The Commercial Department plays an important role in canvassing for Traffic, improving marketing, customer relations in general, booking of traffic, expediting loading/unloading of wagons, quick disposal of unconnected wagons and transshipment of Wagon detached out of course for Hot Axles etc. The various other Departments like Mechanical, Electrical, Civil Engineering and S&T provide and maintain various assets and infrastructure (track, wagons, engines, S&T Network etc.). These departments also ensure sufficient availability, reliability, predictability, safety, and reduction in equipment failures; promptness in restoration in case of breakdowns and accidents should also be ensured. They also endeavour for the achievements in technology upgradation along with the operating strategies and determine the level of excellence in Railway Operations to a great extent. In nutshell, all the functionaries must work as a dedicated team.

Some Indices of Freight Operation and Efficiency

The important Operating Statistics, most of which are indices of Operating efficiency, have been discussed in detail later in this Manual (in Chapter 19 in this volume). Some Indices of Freight Operations and efficiency are highlighted below:

13.6 Wagon Holding

For a given amount of originating loading and receipts of loaded wagons from other Railways and making an allowance for percentage of stock out of commission for repairs, etc., there is an optimum number of wagons that a Railway, and separately its constituent divisions, should hold to maintain the fluidity of transport system. More wagons than the optimum number might lead to increase in the repairs and maintenance percentage, heavier detentions to wagons and trains and transport

bottlenecks, i.e., more congestion in sidings, yards, and sections without a proportionate increase in the tonnes lifted, or in the efficiency of operations. Similarly, excessive shortage of Wagons may lead to loss of traffic. Proper estimation and projection of requirement, proper planning and working at various stages of freight operations is necessary for keeping wagon holding low. "Ineffective Stock" percentage should also be kept minimum.

1. **Interchange Balance**: Maintenance of the interchange target is an indication of a Railway's overall operating performance and its efforts to meet inter railway obligations, hence interchange balance should not be extremely high, even when maximum trains are interchanged. However, attempts should be made to see that on busy sections, interchange is not only confined to few hours of the day but uniformly distributed.
2. **Load of trains:** A train is a unit of transport. Depending upon the load, suitable loco is provided for its haulage. To get the optimum use of motive power and to increase the capacity utilization and throughput, each Locomotive is given a load approximately to the maximum hauling capacity, unless operating necessity requires utilization of a loco for lesser load. The stations should also ensure that wagons are loaded to the carrying capacity or the minimum weight prescribed for some commodities.
3. **Loading and Unloading:** Optimizing the loading is one of the most important items in freight operations because it is through loading that Railway earns the maximum revenue. Similarly, unloading is necessary so that wagon becomes available for next loading. Reducing the time taken for loading/unloading by technology upgradation and other strategies in co-ordination with the customers must be endeavoured.

4. **Empty Running:** Ideally it is waste of transport capacity to run a wagon empty or with light load, but much of empty running is inescapable on account of the unbalanced nature and quantity of outward and inward traffic at terminals and necessity of supplying empty wagons. Certain special type of wagons for POL, Steel, Coal, Natural Gas, Ammonia, LPG etc. must be generally run empty to the loading points. Operating skill lies in avoiding or reducing the extent of empty haulage and cross movements of similar type of empty stock.
5. **Dispatch in Block Rakes:** Dispatching of wagons in small numbers always means transit delay while a block load can go direct to the farthest destination skipping many yards, thereby eliminating detention that the wagons might have suffered in the intermediate yards. Piecemeal wagons passing through several marshalling yards, where they must be combined with other wagons to form train loads, cause huge amount of work for the staff and result in loss of efficiency, avoidable delay, anxiety, and uncertainty regarding their arrival at destination. Unit train movement, i.e., a train load consigned by single consignee to single consignor, is ideal. Consignees can also be motivated to club their Indents to get trainload and block rakes. Also, two points loading on same engine run can improve wagon usage. Close circuit rake movement can also be resorted to between selected pairs of stations or rakes. Maintaining the purity of freight rakes has also to be ensured.
6. **Long Distance Trains:** It is an age-old principle of operations that full train loads should be formed at the earliest point for the longest possible distance. Long distance trains should have least stoppages like long distance passenger trains. Trains can also be run as "crack trains" or Link Train. A crack train/Link Train is a train when the same crew (and engine if possible) instead of "Signing off" at the intermediate crew changing point works a train to farther junction. Thus, a train running from Ujjain to

Godhra or vice versa without Crew/Guard change at Ratlam can be run as X 'Crack'. The Crew can also be utilized on 'Crack' basis when the same Crew perform a round trip without "Signing off" at the outstation and is promptly provided a load so that Crew returns to its Head Quarters within normal duty hours.

7. **Wagon Turn Round:** The interval between two successive loadings calculated from the time a wagon is placed for loading till the time it again becomes available for reloading is the actual turn round. As the calculations for individual wagons in the manner stated above are not practicable, the following statistical formula is generally used:

$$\mathbf{WagonTurnRound(T) = S/(L + R)}$$

Where 'S' stands for the effective daily wagon holding or midnight wagon balance of a day (excluding sick, POH wagons in or waiting for shops, like departmental wagons, wagons lent for departmental use, and the wagons used for coaching traffic). 'L' stands for the total number of wagons loaded on the Division/Railways plus the wagons loaded at Transshipment Point, 'R' stands for the total number of loaded wagons received from other Railway/Divisions. Thus, for example, if a division loads 350 Wagons on BG (including 50 BG Wagons loaded through transshipment of MG Wagons), 150 inward loaded wagons are received from other Divisions and its effective wagon holding at the end of the day (midnight) is 2250wagons, the Divisional Wagon turn round will be 4.5 days.

$$\mathbf{i.e.\ \frac{2250}{350 + 150} = 4.5\ days}$$

8. **Detention to Trains and Wagons:**
   a. Detention to Trains: A check on the detention to trains (1) outside signals or at stations adjacent to Goods Terminals, (2) in shunting operations at

roadside stations and (3) enroute detentions for various reasons should be exercised regularly.

b. Detention to Wagons: Close watch should be kept on the areas, e.g., Marshalling Yards, Goods Terminals, Stabling Points etc., where wagons are likely to suffer avoidable detention during various phases. Although this is watched through periodical data, special attention should be paid to pockets, where piecemeal Wagons suffer prolonged detention and often remain out of sight.

9. **Engine Utilization:** Engines being costly resources their utilization must be carefully monitored. Some of the measures for improving Engine Utilizations are as under:
    a. Running of the Goods Trains on proper path: For this, the Master Charts must be properly framed and consolidated.
    b. Proper co-ordination between Control and Line Staff.
    c. Reduction in Terminal detention of Locos by proper monitoring co-ordination and working of Yard Staff, C&W Staff etc.
    d. Judicious ordering of Trains and Right time starts of Goods Trains.
    e. Proper controlling, judicious crossings, and preferences.
    f. Loop Lines on critical block sections should not be generally blocked.
    g. Stabling and picking up of load should be judicious and carefully planned.
    h. Loco pilot should run at maximum permissible speed subject to restrictions.
    i. Light Engines can be coupled or attached to trains to save path and energy.
    j. Light Engines (Single or Couple) should run at maximum permissible speed, for which they are fit, subject to speed restrictions.

k. Signals must be taken off promptly at Stations. Distant/Warner Signals must always be taken off promptly.
l. Tangible authority to proceed should be handed over at the appointed place instead of getting the train slowed down in front of the Station for handing over the Authority from the Platform.
m. Trains should be run through Main Line (as far as possible) since looping results in extra time on run.
n. Locomotives should be in good working order and staff should be well versed in Loco operations and trouble shooting.
o. Hauling capacity of the Locomotives should be properly utilized.
p. Engineering speed restrictions should be regularly reviewed and reduced by maximizing the output of the Engineering staff and machines. Due care and foresight in offering blocks for track maintenance should be exercised.
q. Regular foot plating by officers and staff involved in operations, motivates train crew, and alerts the line staff.
r. Effective control over traffic yards to reduce other engine hours, detention to locos at important loading/unloading points and industrial sidings.
s. The factors adversely affecting the Locomotive utilization, speed of goods train, terminal detention etc. should be got analyzed by suitable multi departmental teams and remedial measures taken.
t. Incentive schemes for motivation of staff connected with Goods Operation, to improve Engine utilization Special watch on Loco pilots losing time on run and not running on maximum permissible speed.

10. **Average Speed of Goods Trains:** The average speed of goods trains is calculated by the following formula:

Average No. of Goods Trains X Distance travelled by each train in 24 hrs. Speed = Total time taken by all the Goods Trains run.

The distance and the time taken are calculated from the Control Charts. Thus, all detention to good strains enroute enters calculation and has the effect of bringing down the average speed. Almost all the factors affecting engine utilization play part in the average speed of goods trains, the difference being that in the calculation of average speed of goods trains, the detention at originating point and terminating point as well as the Light Engine Running are not taken into consideration. While computing average speed of freight trains

11. **Staff Supervisions:** Excellence in freight operations requires that the staff offer their willing co-operation. To achieve this proper training for constantly developing the knowledge, skills and commitment is essential.
12. **Targets and Statistics:** One of the important means to utilize fully and efficiently the existing carrying capacity of a railway is to set measurable and specific targets for the various performances after taking into consideration all the local conditions. Once the targets are laid down, all possible efforts must be made to attain them. The targets should be set sufficiently high and reviewed constantly with a view to improving performance further. Details regarding Statistics pertaining to Railway Operations are given in chapter on Operating Statistics where targets are not attained within a reasonable period, the causes must be traced and effective remedial action taken, if necessary, revised targets should be laid down.

MARSHALLING YARDS

14

In Railway parlance, the yard can be defined as the place where the trains or rolling stock or group of rolling stocks are received, reformed into trains, or loads after marshalling and are despatched to their destinations. The Yard, if it is located at a stations yard then it is called **station yard** and if it is located outside of station area and specifically made for classification and distribution of trains after receiving, sorting, and despatching the wagons to their various destinations, after the prescribed attention called **marshalling yard**. This necessarily involves detention to trains and wagons, but it is inherent in railway working to have Marshalling Yards.

A Marshalling Yard is a specified area laid out with a network of tracks divided into several grids for receiving, sorting, forming, and despatching of the trains. The yards or marshalling yards may cause detention to the locomotives, rolling stock, and running trains but these are inevitable in railway operation because the trains are formed and re-formed as per their destination. During earlier days, when the rake loading was not prevalent and most of the loading

was in piece meals and wagon loads, bigger yards were in operation but now almost all the places, the loading is in rakes therefore, bigger yards are not required but when traffic will increase the freight, and coaching yard will definitely be required.

14.1 Why is marshalling yards Necessary?

Though Yards perform important functions, yet the work done in a Marshalling Yard is only indirectly productive. Yards are operational necessity and are even considered as necessary evils. The ingenuity of the operating man consists in putting in the minimum number of the wagons into the minimum possible number of Marshalling Yards by forming trains for the farthest common points subject to rules and regulations. If the Control is analogous to brain of the operating system, a large Marshalling Yard is akin to the heart and its working to be planned and monitored with considerable care. Constant vigilance and intelligent and efficient work in day-to-day functions is required as it is one of the important factors governing the capacity and the output of a section. A Marshalling Yard affects not only the traffic it deals with, but also the entire train running on the section, and the working of Railway system in general. The Yard gets easily congested if treated as a holding Yard and if more trains are put in than taken out.

14.2 Classification of Yards

Yards can be classified based on the place of their locations as under:

1. Terminal Yard.
2. Marshalling Yard.

Terminal Yard

Terminal Yard means the Yard attached to terminal goods sheds where large number of wagons are loaded and/or unloaded. This term is also used for every goods Yard, where a goods train terminates.

Marshalling Yard

Yards are nominated as Marshalling Yards based on the work done and wagons dealt with. The Yard which receives and despatch trains without any shunting on them are classified as Transit Yard. In such Yard generally change of Crew, Engine or C&W examination etc. only take place in addition to formations of a few loads. During the last 50 years such yards have become anachronistic and have given way to modern freight terminals the world over.

14.3 Function of Marshalling Yard

1. Quick Transit

a. Accepting trains without detention at adjacent station outside the Yard.
b. Minimising the detention to wagons in the Yard.
c. Timely supply and placement/removal of wagons to the goods shed, transhipment shed, repacking shed, sidings, carriage, and wagons depots etc. served by the Yards.
d. Forming block loads for the farthest destination.
e. Ensuring convenient Marshalling of wagons from the operational efficiency point of view.
f. Ensuring right time start to outgoing trains.

2. Economy:

a. Maximising productivity of resources and minimising the detention to Train Engine/Light Engine, Shunting Engine, crew, and other connected staff.
b. Optimising the Trailing load of the trains.
c. Optimising shunting engine utility.

3. Safety:

a. Ensuring minimum damage to wagons and

consignments loaded on the wagons during the shunting operations.

b. Ensuring safe Marshalling and C&W pattern of examination.
c. Elimination of Yard accidents.

14.4 Kinds of Yards

Marshalling Yard can be classified under three groups based on the method of sorting out trains:

1. Flat Yard

Flat Yards are generally laid on flat or level land where shunting operations are carried out with the help of engine by push and pull method. Such Yard is economical in space but slow in working and wasteful in shunting engine hours.

2. Hump Yard

Hump Yards are constructed by providing gradients between reception and the sorting and despatch lines and the grids. The gradients are created by constructing an artificial hump suitable for the purpose. The gradient of the hump is constructed in such a manner that the wagons roll down of their own to specified sorting lines from the summit(apex) of the hump after having been pushed up by the shunting engine. The load is pushed up by engine towards the hump from one side of the hump so that the uncoupled portion of the load rolls away towards another side of the hump in sorting/despatch line. There are generally two humps one for 'Down' and one for 'Up' Yard. These Yards are economical in shunting engine hours as compared to flat Yards.

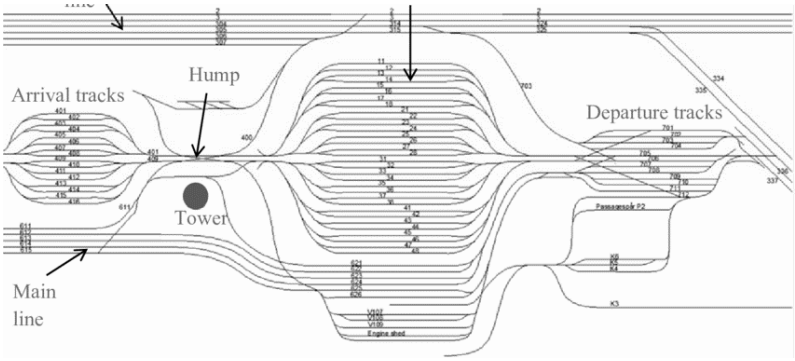
3. Gravity Yard

Gravity Yards are constructed where the natural contour of land permits a suitable falling gradient stretched over a sufficient length. The falling gradient makes it possible to fully use the Yard in Marshalling wagons/trains thus minimising the use of engine power. Therefore, gravity Yards are more economical

than flat Yards but the layout of it dependent on the availability of plenty of land with the required topography which is seldom possible.

14.5 Component of Marshalling Yard

The basic purpose of a marshalling yard is to form the trains to various destinations from mix load rakes consisting of wagon destined to different places. Normally, a marshalling yard has the facility for for receiving, classifying and despatching vehicles to their several destinations as quickly as possible. Since some marshalling yards are situated in the vicinity of important industrial centres, they also deal with traffic originating at or destined for these centres. Every marshalling yard has following bunch of lines.



1) **Reception Lines**

Reception Yard comprises of the lines on which the incoming trains are received and stand clear of other running lines while waiting their turn to be dealt with. Incoming trains may be composed of wagons which are to go through after changing of power, Crew and Guard or of wagons requiring sorting and Marshalling. Separate grids may be provided in the reception Yard one for through trains and another for

terminating trains. Separate reception Yards may be provided for trains coming from different directions. The grids for through trains bye pass the hump.

2) **Classification Lines**

Classification Lines in a yard used for breaking the trains into wagons and placed on the different lines for the various directions, or stations irrespective of stations order, so as to form them into trains and prepare them for correct marshalling.

3) **Sorting Lines**

It is a Yard in which the trains are broken up on the different sorting lines for various directions or specified destinations, as per Marshalling order to form them into trains and prepare them for correct Marshalling.

4) **Departure Lines**

In which load can be held ready for departing trains. Separate departure Yards for trains for different directions are provided in large Marshalling Yard.

5) **Transshipment and goods sheds. -**

The siting and layout of goods and transit siding should ensure that :-

a) The transit shed is invariably laid by the side of the classification yard away from the main lines. The goods shed should be laid adjacent to the transshipment shed.
b) In case of separate up and down yards, access to them should be available from both the yards by means of separate transit shed lines.
c) The length of transship lines and platforms depend upon the work obtained.

6) **Sick Line**

Normally sick wagons are sorted out in the sorting Yard, then sent in the sick line. As the time taken in

placing wagons into and withdrawing them from a sick line is usually several times the time spent in actual repairs. Provisions should be made to carryout whatever repairs are possible in the sorting Yard itself by providing sick lines.

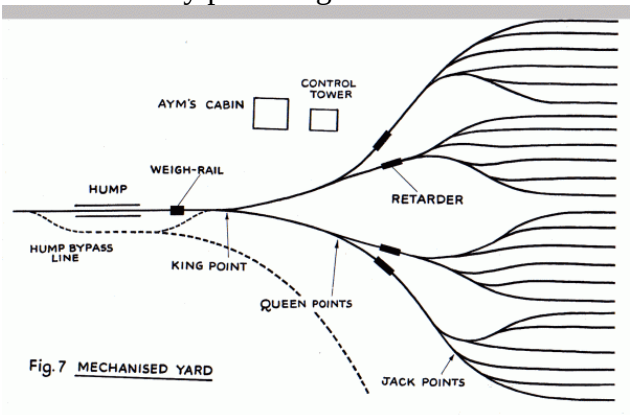


Fig. 7 MECHANISED YARD

14.6 Other Component of marshalling yard are as under:

1. **Shunting Neck:**
   It is a line in a Yard leading to sorting lines on which the actual shunting of the trains may be done clear of any running lines.
2. **Gathering lines:**
   It is a line on which the turn outs to other lines are arranged.
3. **Transfer lines:**
   These lines are meant for transferring wagons, generally from up Yard to down Yard or vice versa, in case of two separate Marshalling or hump Yards.
4. **Bypass or avoiding lines:**
   It is a line, which skirts the hump, and its object is to avoid engine going over the hump. It joins the shunting neck at one end and the main hump line short of the king point at the other. It is also used for

vehicles, which cannot be passed over the hump into the sorting Yard due to various reasons.

5. **Engine Run Round Line:**
   It is the line reserved for movements of incoming and outgoing train engines to and from the Yard or the loco shed, or for independent movement of shunting engines.
6. **Engine Escape Line:**
   It is the line meant for engine movements to and from the loco shed from and to Yard so that engine returning to loco sheds do not interfere with engines, going out of the loco shed, or with any other movements in the Yard.
7. **King Points:**
   The first pair of points a wagon meets with after passing over the hump are called 'King Points'. They divide the sorting Yard into two portions.
8. **Queen Points:**
   The second pair of points a wagon meets with on its way downwards are called Queen Points, which further divide the sorting Yards into four portions.
9. **Jack Points:**
   The third pair of points a wagon meet are called the jack points, and these serve to divert the rolling wagons into the different grids of the sorting Yard. Points beyond jack points called 'Ten points.
   Note: In a hump Yard there are usually a pair of 'king points' two pair of 'Queen points' and four pairs of 'Jack points.
10. **Brake van siding:**
    In this siding, brake vans of incoming terminating trains etc. may be detached for subsequent attachment to originating trains.
11. **Special stock siding:**
    These are provided for keeping for special type stock,

cattle wagons containing commodities like explosives which cannot be humped.

12. **Stabling Lines:**
    In large Yard, ballast, material or POH special, empty military special trains are sometimes required to be stabled. Moreover, there are heavy accumulations of certain classes of stock for various reasons. The stabling accommodation in the Yard should, therefore, be ample so that the Yard may retain its mobility despite any accumulation of wagons or other setbacks.

Retarders:

One of the main problems in the working of a hump Yard is to adjust suitably the speed of the humped wagons rolling down so that they may not cause damage by humping down against wagons already standing on the same line. The speed of the humped wagons varies according to the force of the push given by the engine, the height of the hump, the weight the nature of the axle box (viz. roller bearing or plain bearing) as also on the weather prevailing. In mechanised Yards, retarders or rail brakes are installed to reduce and keep the speed of the humped vehicles under control. The retarders may be automatic or manually operated.

Skids:

At Yards, where mechanical retarders are not provided skids are placed on the sorting lines to control the speed of the humped wagons. These skids are placed by skid porters and the skids automatically come out of runways, where provided, or/and are removed after the wagon has come to stop.

14.7 Telecom Equipment of Marshalling Yard

A Marshalling Yard should necessarily have the best possible telecom facility for proper functioning and efficient supervision of work:

1. **Telecommunication arrangement:** Since a Marshalling Yard covers a considerably big area, the distance between its different points and portions becomes naturally long. Therefore, extensive telecom network, through an electronic exchange and intercoms between all-important points in the Yard, is imperative so that instructions to the supervisory staff can be conveyed quickly over telephone. The Yard should also have direct dialling trunk facilities and Control Telephones, so that instructions to the supervisory staff can be communicated properly and promptly.
2. **Paging and talk-back arrangement:** Major Marshalling Yards are provided with Paging and talk-back sets, through which orders and instructions are issued to the staff concerned, working in different spheres in the Yard, from one central point. Similarly, the staff can also convey any information to the central points. This helps co-ordination between different spheres of the Yard.
3. Loudspeakers are also provided at convenient points so that instructions can be conveyed to different staff working in the same area. For example, loudspeakers are provided in the Sorting Yard, so that the in charge of the hump can convey instructions relating to Hump cabin and the skid Porters regarding the line on to which wagons are being shunted. Similarly, arrival and despatch of trains can be monitored.
4. Extensive use of good walkie-talkies will also go a long way in improving the efficiency of the Yards.

14.8 Organisation of marshalling yard

Marshalling Yard working is controlled by a Chief Yard Master, though small Yards may be controlled by Yard Master. Bigger Yards may be under the control of Area Officer. The Yard in charge has two organisations under him.

1. **Field staff:** It includes the Chief Yard Masters, who is overall in charge of the Yard and Yard Masters in each shift are responsible for operational work. In dual yard system, there may be more than one Yard Masters, e.g., one for Down Yard and another for Up Yard, on the other hand, where the traffic is

comparatively low, Yard Masters may be replaced by Assistant Yard Masters. The next level of supervision is generally related to the shunting engines. Each shunting engine may have an Assistant Yard Master/Shunting Master, attached to it, who controls the movements of the shunting engine. Shunting Jamadar may be included in the organisation to assist them for dealing with the shunting work allotted to each engine. Where the shunting work is not heavy or comparatively unimportant, the Shunting Jamadar may be in charge instead of Yard Master. Each shunting engine generally has a batch of three or four Pointsmen, whose duties are usually as under:

a) For Uncoupling the wagons.
b) For Braking of wagons.
c) For Relaying of signals.
d) For operating the points.

The above staff from the organisation for sorting work besides other staff are also required for various auxiliary functions – cabin staff, call boys, box boys (brake or skid porters in hump Yards) etc. apart from the staff of other departments.

2. **Trains Branch:** CTNC or Head TNC, has overall responsibility for the efficient working of the trains branch. Below them, there are Head TNCs/ Sr. TNCs/TNCs, who may be on shift duties or during day duty only, depending on the workload of the Yard. These Trains Clerks are entrusted with comparatively important work in the trains branch like preparation of Marshalling Yard statistics, maintenance of the Yard Balance Register, Daily Stock Taking etc. The TNCs in shift duties take stock of trains in Reception and Despatching Yard. They also maintain Wagon Exchange Registers, Phase-wise Detention Register, and stock online position. The number of TNCs in a Yard will depend on the number of wagons, trains dealt with in a Yard.

14.9 Yard Working Instructions:

For proper and efficient working of each Yard, general directions for working in each shift should be laid down in the Yard Working instructions. The instructions should deal with all important aspects of working in detail other than the procedure for reception and despatch of trains, etc., which are required to be given in the Station Working Rules to be useful for the general guidance of staff working in the Yard as well as to the new and the relieving staff. The Yard Working instructions should be prepared generally under the following heads:

a. Full description of the Yard including no. of lines with their holding capacity etc.
b. Strength of the Yard Staff in each shift.
c. Quantum of inward, outward, and internal traffic required to be dealt with by the Yard and their timings.
d. Marshalling Orders in force.
e. Shunting engines available in each shift and their utilisation, generally.
f. Procedure of work to be carried out, generally in each shift.
g. Directions to Shunting Jamadars and Yard Masters on arrival on duty, in general, regarding advance planning of the work during their shift.
h. Directions to Shunting Jamadars and Yard Masters regarding position of the Yard at the time of handing over the charge.
i. Important Safety Precautions.
j. Miscellaneous instructions.

14.10 The Works required to be performed by Yards:

Generally, a large Yard is required to perform the following work with due regard to efficiency, reliability, economy, and safety:

a. To pass through trains after changing of engine and carriage examination and detaching sick wagons, if

any, and adjusting load of the train if necessary.

b. To break up and sort out terminating trains and loads and the local loads originating in the Yard.
c. To form originating through trains for the farthest point possible in accordance with long distance Marshalling orders laid down by the HQ office.
d. To form shunting and van trains for the different sections served by the Yard.
e. To hold back trains and wagons until they can go out.
f. To keep wagon detention to the minimum while planning item No. (1) to (5).
g. To move train engines and pilots between the Yard/Loco Shed and sidings.
h. Placement and removal of inward loaded wagons for the goods depots, loco shed, private sidings etc. served by the Marshalling Yard.
i. Placement and removal of wagons from the repacking shed to the Yard.
j. Placement and removal of Sick/Fit wagons from the sick lines.
k. Assessment of room by the nominated shunting trains for roadside stations.
l. Arrangements for supply of stock as per Indent Register and ODR required by the roadside station in accordance with the orders received from the CTNL(Stock).
m. Weighment of wagons in certain nominated Yards as and when required.
n. Maintenance of the correct tally of the daily output of the Yard.
o. Maintenance of record of detentions to other kinds of stock such as local loaded, sick wagons, empties, and special stock etc.

Yard capacity

(a) The maximum number of wagons a yard can accommodate at any one time is its holding or standstill capacity.

(b) The amount of traffic that can be received, dealt with and disposed of by a yard at any one time without affecting its fluidity is known as its working capacity. The working capacity of a yard is obtained by dividing the holding capacity of the yard in 24 hours by the total average detention to wagons in hours.

Yard congestion

(a) When a yard including goods shed or transit shed is unable to cope with the traffic offering or any kind of trouble reduces its working capacity, it causes holdups to rolling stock. The mobility of the yard is curtailed or lost, and an accumulation of unhandled traffic takes place. It leads to strained working and is called congestion.

(b) The causes of yard congestion should be carefully analyzed, and necessary remedial measures applied. Generally, such expedients as transferring some workload to adjacent yard and asking them to make only through loads, introduction of night working in transit sheds, restriction and diversions, relaxation of marshalling instructions, better spacing of trains, better power arrangements or reduction in the number of engineering restrictions would meet the situation.

14.11 Marshalling Yard Statistics:

(Manual of Statistical Instructions Volume-I) (Railway Board has decided that statistics shall be maintained in terms of 8-wheeler units. Same be incorporated by the railways) General Instructions:

a. The Marshalling Yard statistics should be prepared for selected Yards generally dealing with 8000 eight-wheeler wagons and over per month in respect of BG Yards and 5000eight-wheeler wagons and over per month in respect of MG Yards, prior approval of the Railway Board should, however, be obtained for addition or deletion of any Yard.

b. Brake vans are to be included.
c. The area of each Marshalling Yard is to be carefully defined, and no extra allowance is to be made for any work done within that area. A diagram showing the Marshalling Yard are a clearly demarcated should be prepared for the Yards for which statistics are requires to be compiled by the Railway for the Board. This diagram should be readily available at the stations to enable any inspecting officer to obtain a clear indication of the extent of the Marshalling Yard.
d. Sick lines and repacking sheds, transhipment points, goods sheds, departmental sidings, and the industrial sidings etc., may as a rule, be treated as lying outside Marshalling Yards for purpose of calculation of Marshalling Yard statistics.
e. At places, where there are points like the Goods terminal station and/or Brake-of gauge transhipment point etc., continuous to the Marshalling Yard, and the detention statistics foreach of these Yards are compiled separately either for submission to the Railway Board or for inclusion in the Railway's own Domestic Statistics. The sum of detention in each Yard should accord with the total detention from arrival of a wagon till its final despatch from that station. To ensure this, the supervisory staff in-charge should exercise a check, at least once in a month, on a random sampling basis. This check should be broad based covering not only the important categories of wagons e.g., four wheelers, BOX wagons, oil tanks etc. but also the mainstream of movement of wagons to and from different directions. This exercise should cover at least 10% of the total number of local wagons dealt with in the Marshalling Yard during the previous month and the records of such checks should be properly maintained to be available for scrutiny by inspecting personnel.
f. In the case of wagons whose detention or despatch particulars are not available, their detention should not be omitted but reckoned based on the average detention during the month for similar type of stock while working out the average detention per wagon. The number of such wagons should be indicated separately under

through loaded and all wagons for each Yard in a footnote to the statement.

g. Yards provided with humps are to be denoted by a star and terminal Yards should be specified by a note to that effect.

h. Except where otherwise stated, all results, are to be worked out correct to one place of decimal, but those which are less than 10 should be worked out correct to two places of decimal.

Yard performance. - The performance of a yard is judged by the following figures for the month

(a) Number of wagons dealt with during the month.
(b) Daily average number of wagons detached.
(c) Daily average number of wagons dispatched.
(d) Number of trains received and dispatched.
(e) Number of wagons dealt with per shunting engine hour.
(f) Average detention per wagon (a) All wagons (b) Through loaded wagons.

LINE CAPACITY AND THROUGHPUT

15

Like in road transport, the rail transport does not have the flexibility as the trains have to run on railway line. The occupation of railway line with trains determines the path. Therefore, line capacity become one of the important aspects in railway operation if we want to add furthermore trains. The line capacity is also called Section Capacity. The line capacity or section capacity can be defined as **"Number of trains which can be run on the section in 24 hours".** The line capacity is calculated with various mathematical formulas, but most common formula, which is also called GIPR formula or Scott's formula is as under:

$$C = \frac{1440}{T + t} \times e$$

Where C = Line capacity

T* = Running time of the slowest train over critical block section

t = Time for block operation

e = Efficiency factor

*The critical block section is such block section where time taken by slowest train.

The line capacity can further be explained in different connotations as per need of the study. Generally, there are four type of line capacity as under:

1. Maximum line capacity
2. Practical line capacity
3. Charted line capacity
4. Economic line capacity

1. Maximum line capacity:

Maximum line capacity can be calculated based on maximum number of trains that can be run on a section to the extent that there should not be any possibility to add even a single train in the master chart. In other words, the maximum number of trains run in a section determines the maximum line capacity of the section.

2. Practical line capacity:

The practical line capacity can be ascertained after deduction of the time allowance for maintenance block, loco allowance, and other time margin for running the passenger carrying train punctually. As we know, the maximum number of trains cannot always be run as it will affect maintenance of the track, the time margin for unforeseen circumstances like unusual. Practical line capacity is basically the actual line capacity on which all calculations are based.

3. Charted capacity

Charted capacity of a section is calculated by plotting the trains in the master chart. The train paths are plotted in a time-distance graph for 24 hours. First path of all schedule mail express and passengers' trains are plotted. First paths of all Scheduled Express/ Passenger trains are plotted. Then goods trains are plotted. And after other paths are plotted as many as possible in the chart.

Line Capacity by charting is more accurate as this method takes into account all the peculiarities of a given section. It should not be less than the Line capacity as per Scott's formula as it is based on the slowest moving train over critical section. In Indian Railways Line Capacity is calculated based on Charting method.

4. **Economic line capacity:**

The economic line capacity is worked out based on the number of trains which can be run maintaining the efficient way of transport. In other words, if we can run a greater number of trains with punctuality, speed, and maintenance without deterioration of any indices of train operation. In other words, as the number of trains to be operated on a section grows larger and larger and the section starts getting saturated, it becomes more and more difficult to increase the train services without increasing the time loss in train operation. As a result, the utilization efficiency of the rolling stock and the train crew decreases and maintenance cost of the track increases. This leads to a gradual increase of the transportation cost per train kilometer. The optimum number of trains which can be run on the section economically is the economic line capacity.

15.1 How to increase Line Capacity

The line capacity can be increased by employing following measures:

1. Reduction in the length of block section.
2. Increase the speed of trains.
3. Provide automatic signals.
4. Provide bypass lines, where the traffic is slowing due to congestion.
5. Use of a better signaling system to improve the speed of the train.
6. Introduce a greater number of self-propelling trains like MEMU and DEMU.

7. Increased CSL / CSR of all the running lines at all stations and yards.
8. Provide AWS, ACD, CTC.
9. Proper timetabling of passenger trains gives way to running more freight trains.

The line capacity to a certain extent can be increased without measure intervention if we monitor the trains as under:

1. Proper planning, controlling, and efficient ordering of the freight trains.
2. Better Time tabling of coaching trains and ear marking the freight path in every section and run the freight train on these paths.
3. Proper maintenance of assets specially the track, signal, OHE and rolling stock instruments
4. To reduce the time in block operation and reduction in crossing and precedence.
5. Better utilization of information technology, especially FOIS and COIS.

15.2 Throughput

The throughput of a section is total quantum of Traffic which can be transported over the section in a period of 24 hours. The traffic transported may include Passenger Traffic, Freight Traffic or any other specialize traffic. In railways, the throughput is generally measured in terms of passengers and freight.

The Passenger Throughput can be calculated based on the number of passengers travelled and the distance they travelled. Passenger Throughput is calculated in terms of Passenger Kilometres (PKM). The formula for passenger throughput is as under:

Passenger
Throughput = No. of Passengers Traveled X Distance they traveled in Kms

The goods throughput is calculated and expressed in term of following indices.

(a) Number of wagons moved or

(b) Gross Tonne Kilometres or

(c) Net Tonne Kilometres carried over a section.

Throughput in Indian Railways commonly refers to Goods Throughput in day-to-day Operation and expressed in terms of number of wagons. For commercial and revenue calculations, throughput is assessed in form of Net Tonne Kilometres (NTKM). Net Tonne Kilometres (NTKM) indicates that the actual weight in form of a tonne and chargeable as freight travelled one kilometre. It is only productive worked in term of money done by railway. Therefore, a keen observation must be made on this statistical figure and efforts be made to increase it.

The higher throughput will result as under:

1. Increases in Wagon Utilization
2. The Railways Revenue will increase with same kind of infrastructure and operation.
3. The congestion in the Yard and Sections will ease and speed will increase.
4. Line capacity will also increase as only loaded stock will run and the empty running of the trains will be reduced.
5. The cost of transport per km will be reduce and which can be transferred to customer with discount in freight.

15.3 How to improve throughput:

The throughput can be improved by

1. Proper utilization of line capacity by way of running a greater number of freight trains and if freight trains are not available then Mail Express Trains.
2. Reduce empty freight and coaching rake movement, Light Engine Movements, avoid detention of wagon in loading and unloading. by ensuring that every engine carries sufficient Load.
3. Avoid pre-departure detention of the rake, better utilization of crew, maintaining punctuality, running the freight trains as Crack Specials with extended Crew Run.

4. Mobilized High-HP loco and run a greater number of heavy haul freight trains.
5. Introduction of High-Capacity Wagons with heavier axle load with a greater number of wagons in a rake.
6. The infrastructure specially track be upgraded, the loop line length being increased.
7. The speed of freight trains must increase.

Further, throughput can be increased by way of technological upgradation to increase trailing load of the train. Some of the measures can be tried as under:

1. Induction of High-Capacity Diesel and Electrical Locomotives and Multiple Operations of Locomotives in freight train.
2. Improving Rolling Stock with CBC coupling and draw bar capacity of 80 tons or more.
3. Improved roller bearing on Rolling stock.
4. Increasing carrying capacity of rolling stock without much increase in length or tare weight.
5. Improved Braking System (Air Brake and Disc Brake System) to maintain desirable 'Braking Distance'.
6. Increasing Permissible Axle Load and permissible moving dimensions by Civil Engineering Works.
7. Increasing Loop Capacity and Strengthening the Loop Lines.
8. Improved system of Communication between Engine crew, Train Staff, Station Master, and Controller.
9. Adequate Terminal Capacity and facility to deal with Heavy Haul Operations.
10. Re-scheduling and Curtailing running of slow stopping passenger trains on heavy haul routes or on dedicated tracks.
11. Integrated 'Mega Blocks' to prevent frequent departmental maintenance blocks.
12. Up gradation and modernization of techniques and methods of attending to trouble shooting and break downs.
13. Up gradation in the Skill and Knowledge of 'Train Running' and 'Train Passing' staff.

INTRODUCTION TO TRAFFIC PLANNING

16

Traffic planning essentially refers to planning augmentation of infrastructure to cater freight and passenger traffic demands. As traffic demand continuously changes, we need to plan adequate infrastructure facilities well in advance. This would optimize operating efficiency and contribute to overall economic growth of the nation.

The aspects and assets of planning can be segregated as under:

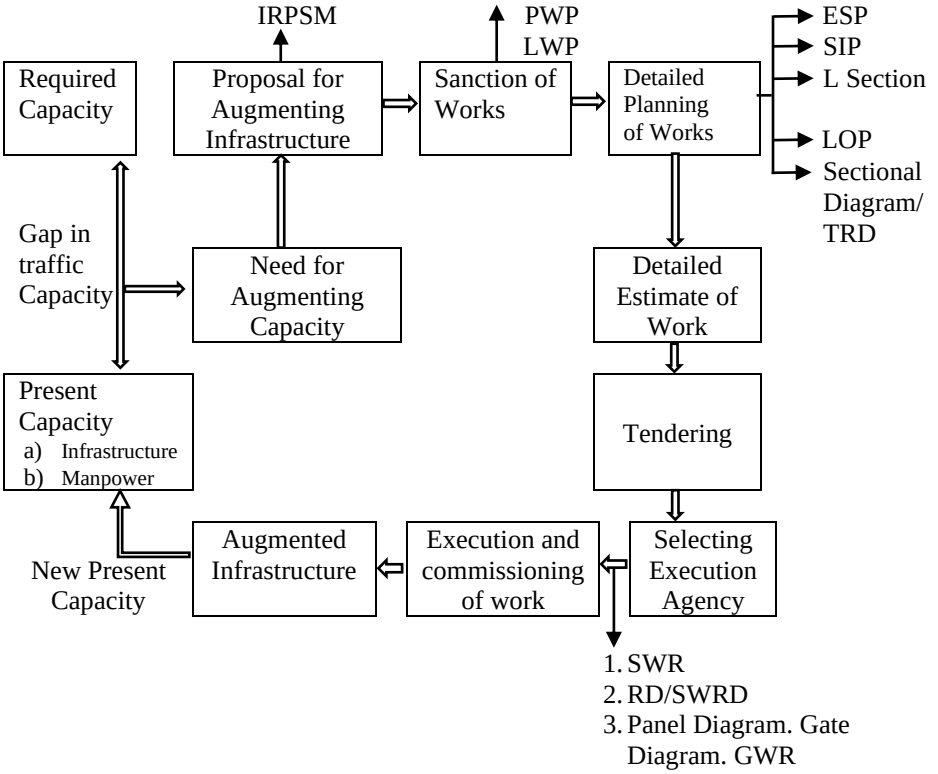
1. Importance of yard layouts
2. Different types of yard layouts
   a) Fishbone type of layout
   b) Gather type layout
3. Stations- include.
   a) New roadside station with or without good shed
   b) Terminal station
   c) Junction station
   d) Big terminal station
   e) Station building
4. Terminals- include.
   a) Coaching examination terminal
   b) Freight examination terminal
   c) Good sheds terminals

d) Private Sidings

5. Section or Line capacity-
   a) Planning of 3rd and 4th Lines
   b) Long Loops
6. Other aspect of planning
   a. Provision of track machine siding/ ballast siding
   b. Elimination of key locked point on running lines
   c. Elimination of PSR and raising of speed after commissioning
   d. Check list for Engineering scale plan (ESP) and signalling interlocking plan (SIP)
   e. Station Building plan.
   f. Elimination of LC gates

16.1 Planning Process in IR

The process of traffic planning is illustrated by means of a flow chart depicting various stages of planning-



* Manpower planning has to be simultaneously done along with capacity augmentation

The planning process in Indian Railways starts with the identification of gap in traffic capacity or an operational constraint in running trains. It is a result of analyzing the current capacity and the required capacity to meet the passenger and freight traffic demands.

Once the gap between the present and desired infrastructure (both physical infrastructure and manpower) is assessed, a need is felt for augmenting capacity. This is then translated into the proposal for augmenting infrastructure based on abstract cost and justification for the project. The works program in railways are proposed under different Plan heads. At present there are 27 Plan Heads available in books, however capital expenditure is generally incurred under the following 18 plan heads. A list of important plan heads along with their plan head coordinators is mentioned below:

List of Plan Heads and Plan Head Co-ordinators

PH No.	PH Name	Plan Head Coordinator	
		Divisional	Zonal Rly/PU
11	New Lines	Sr.DOM	COM
14	Gauge Conversion		
15	Doubling		
16	Traffic Facilities		
81	Metropolitan transport projects		

PH No.	PH Name	Plan Head Coordinator	
		Divisional	Zonal Rly/PU
29	Level Crossing Gates	Sr. DEN/Co	CTE
30	ROB/RUB		CBE
31	Track Renewals		CTE
32	Bridge Works		CBE
51	Staff Quarters		PCE
52	Staff Amenities		PCE
64	Other Specified works		PCE

PH No	PH Name	Divisional	Zonal Rly/PU
17	Computerization	Sr. EDPM	CCM
33	S & T	Sr. DSTE	CSTE

35	Electrification Projects	Sr. DEE	CEE
36	Other Electrical Works	Sr. DEE	CEE
42	Workshops	Sr. DME	CWE
53	Passenger amenities & amenities & another rly. User amenities	Sr. DCM	CCM

This is uploaded on IRPSM **(Indian Railways Projects Sanctions & Management)** which is a Web-based Application that allows Online Creation & Forwarding of 'New Works' proposals along with modifications to 'Works in Progress' from Zonal Railways and PUs to Railway Board. This becomes basis of printing of Works Programme, Pink Book and other sanction books after processing & sanctions of Projects in Railway Board, Zonal Railways/PUs, Divisions etc.

The proposal is sanctioned in form of works program, which may either be PWP (Preliminary works program) or LWP (Local works program). In order to provide greater flexibility at field level, the concept of **umbrella work** was introduced in the year 2018-19. It was to bring similar works at different location under one umbrella and approved as a single work at the Railway Board level. Umbrella work remains in pink book till all works under the said umbrella work are executed and cost is exhausted.

Once the work is sanctioned, detailed planning of work is taken up which includes preparation of GAD, L section drawing, ESP, SIP, LOP, sectioning diagram of OHE, building plan, etc. Based on this the detailed estimate for the project is prepared, and a suitable tendering process is followed to put in place, the most eligible agency for executing the work.

On finalization of Tender the executing agency is awarded the contract and execution of the work is commenced as per the approved drawings mentioned above. Towards the end of the work, when commissioning of the project is planned, various other documents like Station working rule i.e. SWR, SWRD/RD, Panel

diagram, Gate working rule and Gate diagram, Selection tables of signaling, cabling route plan, EIG etc. are finalized.

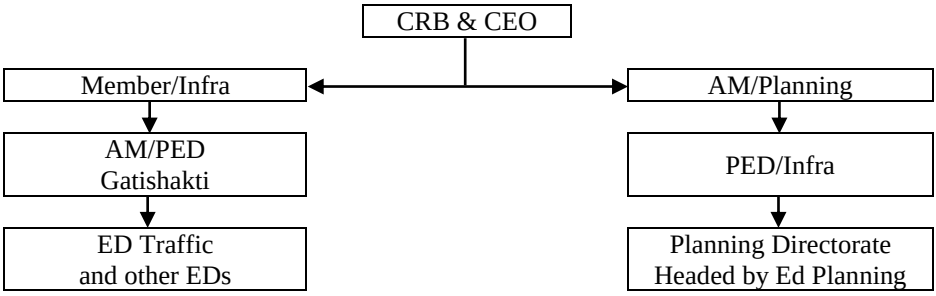
Another critical element of traffic planning is planning for adequate manpower to use the newly created infrastructure. They should be done simultaneously, along with planning for infrastructure to avoid undo duress on the existing manpower. This is done based on the benchmarking done by RB for manning of various activities as well as HOER rules.

16.2 Planning Structure in Indian Railways

At Railway Board

As per office order 64 of 2022 dated 08.09.2020 annexure-II, regarding revised organizational structure of Railway Board, planning has been allocated to CRB & CEO. Under this arrangement AM/Planning & PED/Infra directly report to CRB & CEO. Further they are assisted by a planning directorate headed by ED planning. An additional reporting hierarchy has been added with the creation of **Gatishakti** directorate headed by AM/PED Gati Shakti who reports to Member Infra who in turn reports to CRB &CEO. Gati Shakti directorate is assigned to execute works of station development and other infrastructure augmentation works.

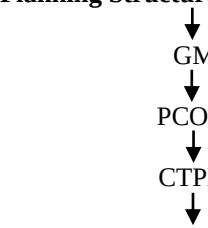
Planning Structure at Board Level



At Zonal Level

At Zonal level, the nodal officer for coordinating traffic planning is CTPM (Chief Traffic Planning Manager). CTPM coordinates with HODs of other branches for approval of plans pertaining to traffic facility works. CTPM reports to PCOM who further reports to GM.

Planning Structure at Zonal Level

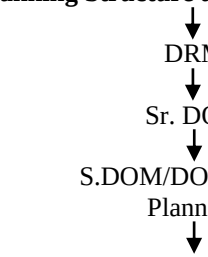


At Divisional Level

The planning structure at divisional level is headed by DRM. Sr. DOM is the nodal officer for traffic planning related to all traffic facility works. He is assisted by officers and planning cell which is manned by traffic inspectors looking after planning.

Apart from this Sr. DOM is the coordinating officer during approval and construction stage for setting up a new GCT as per GCT policy 2022.

Planning Structure at Divisional Level



PRIME MINISTER
GATI SHAKTI NATIONAL MASTER PLAN

17

Traditionally, there was lack of coordination between different Departments, for example, once a road was constructed, other agencies dug up the constructed road again for activities like laying of underground cables, gas pipelines etc. This not only caused great inconvenience but was also a wasteful expenditure. To address this, efforts were made to increase coordination so that all cables, pipelines etc. could be laid simultaneously. Steps have also been taken to address other issues like time-taking approval process, multiplicity of regulatory clearances etc. In the last few years, the Government has ensured unprecedented focus on infrastructure through a holistic outlook. This helps to address the past issues through institutionalizing holistic planning for stakeholders for major infrastructure projects. Instead of planning & designing separately in silos, the projects will be designed and executed with a common vision.

PM Gati Shakti is a digital platform, and a holistic infrastructure development programme, aiming to improve the productivity of industries and employment opportunities, through the medium of

synergizing various government ministries, it is an integrated step towards developing modern India, consisting of railways, aviation, waterways, and roadways. Hon'ble Prime Minister on 15th August 2021 announced the "Pradhan Mantri Gati Shakti National Master Plan', which means **"the power of speed"**, marking **"Azadi ka Mahotsav** as India enters its Amriti Kaal.

Hon'ble PM mentioned that the purpose of **Amrit Kaal was to improve the lives of India's citizens, lessen the divide between cities and villages, introduce the latest technologies and opt for minimum government and maximum governance.** It includes four priority areas, namely.

1. PM Gati Shakti,
2. Inclusive Development,
3. Productivity Enhancement and Investment, Sunrise Opportunities, Energy Transition and Climate Change, and
4. Financing of Investments.

Pegged at a budget of Rs. 100 lakh crores, this national master plan for multi-modal connectivity will break departmental silos and institutionalize holistic planning for stakeholders across major infrastructure projects This would enable departments to have visibility of each other's projects and to beat the categorized bureaucratic system, through integrated planning and coordinated execution.

17.1 Objective of PM Gati-Shakti

The PM Gati-Shakti aims to create Next Generation Infrastructure by learning from the past. The PM Gati-Shakti National Master Plan is as an integrated plan which will address the missing gaps to ensure seamless movement of people, goods & services.

1. It aims to enhance ease of living, ease of doing business, minimize disruptions and expedite completion of works with cost efficiencies.

2. The PM Gati-Shakti will help in achieving the objective of an 'Aatmanirbhar Bharat' by providing visibility to various stakeholders.
3. Instead of planning & designing separately in silos, the projects will be designed and executed with a common vision.
4. It will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN.
5. Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones etc. will be covered to improve connectivity & make Indian businesses more competitive.
6. This will boost economic growth, attract foreign investments, and enhance the country's global competitiveness.

17.2 Vision of the PM Gati-Shakti

The vision of this priority area is to incorporate schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN, etc., and increase the range of Economic Zones such as textile clusters, defence corridors, pharmaceutical clusters, electronic parks, industrial corridors fishing and agricultural zones to improve connectivity and ensure that Indian businesses become more competitive. It would also extensively use spatial planning tools with ISRO (Indian Space Research Organization) imagery developed by BISAG-N (Bhaskaracharya National Institute for Space Application and Geoinformatics) as one of the ways in which to leverage technology for a coordinated execution of the projects.

17.3 The PM Gati-Shakti National Master Plan

The Union Cabinet cleared the PM Gati-Shakti - National Master Plan for multi-modal connectivity to economic zones on 21st October 2021. It is a giant stride in India's ambitious goal of achieving US $5 trillion economy.

Announced during the Prime Minister's address to the nation on the

75thIndependence Day from Red Fort, The PM Gati-Shakti (speed and power) focuses on India's citizens, industries, manufacturers, farmers, villages among others. The PM Gati-Shakti is supposed to break departmental silos and institutionalize holistic planning for take holders across major infrastructure projects.

The PM Gati-Shakti will ensure that India of the 21st century does not waste money or time due to lack of coordination in infrastructure projects. Under the PM Gati-Shakti National Master Plan, everything, from roads to railways, from aviation to agriculture, various ministries and departments would be linked. A technology platform has also been prepared for every mega project so that every department has accurate information on time.

PM Gati Shakti shall bring in various stakeholders together and help integrate different modes of transportation. It will give new energy to the present and future generations of the country to build India of 21st century and lay the foundation of Aatmanirbharta for the next 25 years.

The master plan takes a holistic approach to sector-specific developments by integrating 16 ministries in a joint committee to implement and monitor Rs. 100 lakh crores of investment.

A closer look at the sector-wise take outs are as follows:

1. **Telecommunication sector**
   In the Telecommunication sector, a total length of 35,00,000 km of optical fiber cable network is to be laid down by 2024-25. Connecting all 2,50,000 Gram Panchayats with high-speed internet and 4G mobile connectivity by 2022.
2. **New and Renewable Energy sector capacity**
   New and Renewable Energy sector capacity is to be increased from 87.7 Gigawatt to 225 Gigawatt by 2024-25. 50 per cent of India’s power generation capacity is to be met by renewable energy sources by 2024-25.
3. **Power transmission network**
   Power transmission network is to be upgraded from 4,25,500 circuit

km to 4,54,200 circuit km by 2024-25. Transmission network performance parameters to match the best global standards.

4. **Petroleum and Natural Gas sector**
   In Petroleum and Natural Gas sector, 17000 km long trunk pipeline, connecting major demand and supply centers for industries, is to be added by 2024-25 making a total length of 34500 km of pipeline across the country. All states to be connected with the trunk natural gas pipeline network by 2027.
5. **Sagarmala**
   Powered by Sagarmala, shipping sector to see an increase in cargo capacity at the ports to 1759 Million Metric Tonnes per Annum (MMTPA) by 2024-25 from 1282 MMTPA in 2020. Cargo movement on all national waterways will be 95 Million Metric Tons (MMT) by 2024-25 from 74 MMT in 2020. Cargo movement on Ganga to be increased from 9 MMT to 29 MMT by 2024-25.
6. **Powered by Regional Connectivity Scheme –**
   UDAN, civil aviation sector to see an increase in the aviation footprint globally. 220 airports, heliports, and water aerodromes to be operational by 2024-25. 109 airports including existing 51 airstrips, 18 greenfield airports, 12 water aerodromes and 28 heliports to be developed by 2024-25.
7. **Bharatmala**
   Powered by Bharatmala, in the road transport and highways sector two lakh km route of national highway network to be achieved by 2024-25. Along the coastal areas, 5590 km of four & six-lane national highways to be completed by 2024-25. All state capitals in North Eastern Region to be connected with either four-lane National Highway or two alternate alignments of two-lane configurations each by 2024-25.
8. **Indian Railways**
   By 2024-25, Indian Railways to see a decongestion by 51 per cent due to completion of critical projects. Cargo to be handled by Indian Railways will be 1600 million tonnes up from 1210 million tons in 2020. Western and eastern dedicated freight corridors for faster movement of freight trains to be completed.

One of the important features of the master plan is the establishment of Economic Zones to boost ease of doing business in India. Some sectors where Economic Zones are proposed are as follows:

1. For promotion of industry and internal trade, 11 industrial corridors comprising 32 nodes/projects to be developed in four phases by 2024-25. Greenfield smart industrial cities are to be created for reliable, sustainable, resilient, and quality infrastructure for industries.
2. 90 textile clusters/mega textile parks to be developed by 2024-25. 10 mega integrated textile regions/parks to have plug and play facilities, common facilities, and integrated value chain to boost scale and efficiency with two parks partly dedicated to machinery manufacturing.
3. 109 pharma and medical device clusters to be developed by 2024-25. 10 pharma clusters to be developed by financing common facilities worth Rs. 20 crore each. Further, three bulk drug parks and four medical device parks to be developed.
4. For electronics manufacturing, 38 Electronic Manufacturing Clusters (EMCs) to be developed by 2024-25. Among them, 23 new clusters to have plug & play and CFC facilities.
5. By 2024-25, two defence corridors to be developed with a target investment of over Rs.10000 crore each. A turnover of Rs. 170000 crore including export of Rs. 35000 crores in aerospace and defence goods and services to be achieved by 2024-25.
6. By 2024-25, 197 mega food parks and agro processing centers to be developed increasing the food processing and preservation capacity from 222 lakh MT to 847 lakh MT. Further, a value chain development of agri-food produce on cluster basis would be done.
7. By 2024-25, 202 fishing clusters/fishing harbors and major fishing landing centers to be developed with an additional fish production of 70 lakh metric tonnes and doubling of fisheries exports. Integrated aqua parks as hubs of multifarious fisheries activity to be developed.

17.4 Six Pillars of The PM Gati-Shakti National Master Plan

There are six pillars supporting the Master Plan and facilitating coordination between Ministries and Departments:

1. **Comprehensiveness:**
   All Departments would have access to visibility of projects of each other's activities, providing critical data for planning and execution in a comprehensive manner. The centralized portal would include all the existing and future projects of various Ministries.
2. **Prioritization:**
   The Ministries would now be able to prioritize their projects through cross-sectoral interactions made through the Gati Shakti portal.
3. **Optimization:**
   The National Master Plan will assist different Ministries to coordinate their projects after identification of critical gaps Transportation of goods would also be easier as the plan would help select the optimum route, redating time, and cost.
4. **Analytical:**
   It will provide all the data in one place using GIS based spatial planning and analytical tools with over 200+ layers, as a means of enabling better coordination and execution of projects.
5. **Synchronization:**
   Ministries often work at individual capacities and in silos, leading to a lack of coordination in planning and implementation of projects, resulting in delays. The plan is to synchronize the activities of such departments, as well as the different layers of governance in a holistic manner.
6. **Dynamic:**
   All the various Ministries and Departments will be able to visualize, review and monitor the progress of cross-sectoral projects, using the GIS platform as the satellite imagery will give on-ground progress periodically and which would be updated regularly on the portal. This will help in identifying the

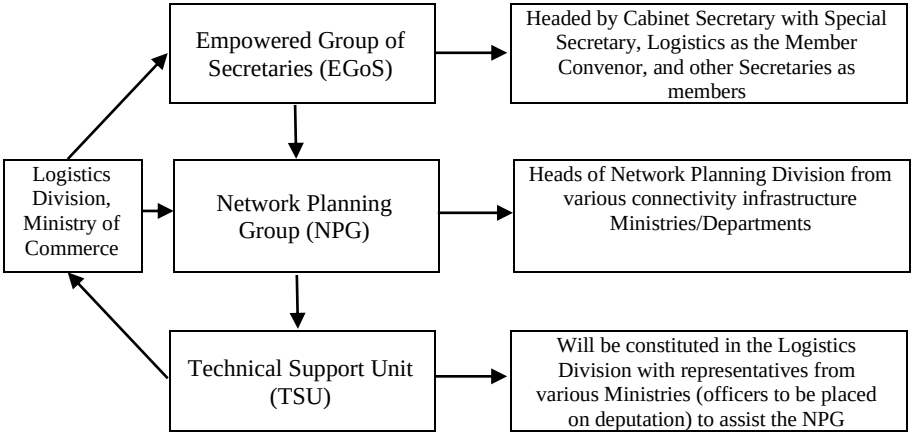
vital interventions required for enhancing and updating the master plan.

17.5 Institutional Framework

The National plan will give impetus for the rolling out of government policies related to infrastructure, for planning and execution. It would employ the usage of next generation technology, multimodal connectivity, and modern infrastructure to gain momentum from its initiation. Hence, the institutional framework for rolling out, monitoring and implementation of projects is designed to be supported by a three-tier system:

1. **Empowered Group of Secretaries (EGOs):**
   EGOs will be headed by the Cabinet Secretary and consist of the Secretaries of 18 Ministries as members, and the Head of Logistics Division as the Head Convenor. It has been mandated to review and monitor implementation of the PM Gati Shakti National Master Plan to ensure logistics efficiency,
2. **Network Planning Group (NPG):**
   It will consist of heads of Network Planning wing of respective Infrastructure Ministries and assist the EGOS.
3. **Technical Support Unit (TSU):**
   It is approved for providing the required competencies for the complexities involved in the overall integration of networks, enhancing optimization to avoid duplication of works for holistic development of any region and reduces cost of logistics through micro- plan detailing.

Governance framework



Besides the institutional framework, the implementation of the plan also depends on stakeholder synergies, financing infrastructure and status of credit information. Bringing in local municipalities and state governments into the folds of this plan would ensure a smooth coordination and facilitation for projects, increasing connectivity and mobility.

S. No.	Ministry/Department
1	Ministry of Railways
2	Ministry of Road, Transport & Highways
3	Ministry of Ports, Shipping and Waterways
4	Ministry of Civil Aviation
5	Ministry of Petroleum & Natural Gas
6	Ministry of Power
7	Department of Telecommunications
8	Ministry of Coal
9	Ministry of Mines
10	Department of Chemicals & Petro-Chemicals
11	Department of Fertilizers
12	Ministry of Steel
13	Department of Expenditure
14	Department for Food and PDS
15	Ministry of Agriculture and Farmer Welfare

16	Ministry of Fisheries, Animal Husbandry & Dairying
17	Ministry of Tourism
18	Ministry of Commerce and Industry
19	NITI Aayog
20	Ministry of Housing and Urban Affairs
21	Ministry of Electronics and Information Technology

To design and maintain such modern infrastructures, financing bodies can help enhance capital base, speeding up of debt resolution system and ensuring higher scalability for banks and non- banks to participate in. And finally, the sharing of credit information by a credit institution to a central agency is in public interest and can be used to mitigate credit risk.

17.6 Role of state governments in PM Gati-Shakti

The State governments have large infrastructure responsibilities spread across departments and agencies. Success of The PM Gati-Shakti National Master Plan for multi modal connectivity largely depends upon the coordination between:

i. Various Central Ministries/Departments with various State Government/Departments.
ii. various Departments within a State.
iii. various Departments of a State with various Departments of another States.

It is essential that a The PM Gati-Shakti State Master Plan be prepared for providing multi-modal connectivity infrastructure for various economic zones in the State. It is further envisaged that State-level EGOS headed by Chief Secretary on the pattern of EGOS is also constituted. Similarly, creation of NPG at State Level and TSU in industries departments of State Governments are required.

17.7 Role of district administration

The District Administration will help in ground-level implementation of the planned initiatives/projects under PM Gati-Shakti including expediting the district level approval

processes. It is essential that required layers of data are mapped on GIS platform. Its visualization and utility by district administration will help in attaining the objective. Also, it will help in identifying district level projects which will complement the initiatives/projects of the Central Ministries/ Departments and State Governments.

17.8 How Gati-Shakti will be beneficial for the common man.

1. The multi-modal connectivity will provide seamless movement of people, goods, and services from one mode of transport to another.
2. National Master Plan will facilitate the last mile connectivity of the infrastructure so that road, rail, power, optic fiber cable, gas pipeline etc. are available to the people.
3. Public transport platforms such as the Indian Railways, Metro Trains, Regional Rapid Transit System (RRTS), Interstate Buses, Bus Rapid Transit (BRT) as well as Aviation can no longer operate in isolation and must come together to provide integrated and seamless connectivity to commuters.
4. This needs to start with integrated planning for implementation of efficient interchanges. For example, Sarai Kale Khan and Anand Vihar RRTS stations have been planned by dovetailing the existing infrastructure and the proposed projects, like Bus Terminal, Metro, Railway Station, Taxi Stand, Shopping Complex, Office Spaces etc., of various agencies for development of the Multi Modal plans for this area.
5. This will provide safe & weather protected transit with seamless interchanges thus promoting ease of living for the people. This concept is proposed to be replicated at important interchanges as prioritized under the plan.

17.9 How will Gati-Shakti facilitate Ease of Doing Business

1. The plan will provide the public and business community information regarding the upcoming connectivity projects, other business hubs, industrial areas, and surrounding environment.
2. This will enable the investors to plan their businesses at suitable locations leading to enhanced synergies.
   For example, Bargur SIPCOT Industrial Estate in Krishnagiri District was established in 1993 in an area of 1,093 acres. However, on account of non- availability of road and rail connectivity, the response of industrial land was very weak due to which only 30 percent land could be allotted till 2020. If the road and rail connectivity had been ensured beforehand while developing an industrial estate, the take-off of the project would have been faster.
3. National Industrial Corridor Programme where new greenfield industrial cities are getting developed, the multi modal connectivity is planned from the very beginning in coordination with various line departments/ ministries so that once the Industrial Area is ready with all the plug n play infrastructure facilities, the to and fro connectivity through various modes is also available.
4. Environmental clearances, common facilities and single window clearance systems required by industries are being provided upfront facilitating ease of doing business for the industries.

17.10 Establishing Economic Zones

One of the important features of the National Master Plan, is the establishment of Economic Sector Zones, to boost India's ease of doing business. Some sectors where they have been proposed are:

1. For promotion of industry and internal trade, 11 industrial corridors comprising 32 nodes/projects to be developed in four

phases by 2024-25. Greenfield smart industrial cities are to be created for reliable, sustainable, resilient, and quality infrastructure for industries.

2. 90 textile clusters/mega textile parks to be developed by 2024-25. 10 mega integrated textile regions/parks to have plug and play facilities, common facilities, and integrated value chain to boost scale and efficiency with two parks partly dedicated to machinery manufacturing.
3. 109 pharma and medical device clusters to be developed by 2024-25. 10 pharma clusters to be developed by financing common facilities worth Rs. 20 crore each. Further, three bulk drug parks and four medical device parks to be developed.
4. For electronics manufacturing, 38 Electronic Manufacturing Clusters (EMCs) to be developed by 2024- 25. Among them, 23 new clusters to have plug & play and CFC facilities.
5. By 2024-25, two defence corridors to be developed with a target investment of over Rs. 10000 crore each. A turnover of Rs. 170000 crore including export of Rs. 35000 crores in aerospace and defense goods and services to be achieved by 2024-25.
6. By 2024-25, 197 mega food parks and agro-processing centers to be developed increasing the food processing and preservation capacity from 222 lakh MT to 847 lakh MT. Further, a value chain development of agri-food produce on cluster basis would be done.
7. By 2024-25, 202 fishing clusters/fishing harbors and major fishing landing centers to be developed with an additional fish production of 70 lakh metric tonnes and doubling of fisheries exports. Integrated aqua parks as hubs of multifarious fisheries activity to be developed.

17.11 Focus on Logistics

The logistics sector has been recognized for the first time in the Union Budget of 2022, and for the significant role it plays in the

economy. Focusing on this sector will attract more investments from institutional funds and developers, led by the PM Gati Shakti plan to set up multimodal logistics parks and other initiatives. Following this, logistics hubs in tier 2 and tier 3 cities will reap the benefits, apart from the major metropolitan cities such as Mumbai, Delhi NCR, Kolkata, Bangalore, etc.

This recognition has been lauded by several industry leaders and Ministries as a transformative step towards an integrated network for monitoring and coordination of projects and the Finance Minister's efforts to simplify the tax structure. This would bring together 16 ministries, including railways and roadways, and 24 digital systems of six ministries through Unified Logistic interface Platform (ULIP), creating a National Single Window Logistics Portal that would effectively reduce logistic cost.

One of the primary examples of the Centre's focus on connectivity would be the first freight train reaching Manipur's Rani Gaidinliu Railway Station, Tamenglong, after 75 years of independence, allowing for further transformation in the North-Eastern region of the country.

The Union Minister for Commerce and Industry, Shri Piyush Goyal, notes that the export target of US $650 billion with 2022's financial year would be achievable, as a target of $400 billion merchandise exports is within sight and the services sector should strive for US $250 billion in exports. India had recorded its highest ever monthly merchandise exports in December 2021, with $37.29 billion, indicating a rise of 37 per cent over USS 27.22 billion in December 2020 and an increase of 37.55 per cent over US$ 27.11 billion in December 2019.

By encouraging private participation in the market, India aims to capitalize on the advantage of its geographical location and create a robust system of catering to domestic and international market demands and investments. The plan aims to boost warehousing and

logistics facilities within the country, expanding the depth of reach to new age consumers, who are rapidly increasing as the country's digital/internet reach increases.

Apart from the infrastructure developments, experts have also focused on the sustainability initiatives of the plan. The Amrit Kaal initiative conceptualized by the government to boost ease of doing business would aid in Improving productive efficiency of capital and human resources. The announcement of a battery swapping policy, the introduction of a uniform standard of batteries for e-vehicles, while encouraging the public and private sectors towards a sustainable and eco-friendly approach has also been deemed commendable by many.

17.12 Benefits of the Plan

1. The higher share of freight for the railways and railroad multi-modal connectivity shall provide multiple benefits such as:
   a) Reduced cost of logistics to GDP that has prevailed at about 14% to an aspirational 8%.
   b) Addresses the challenge us reducing vehicular emissions from road freight growth to meet climate change commitments and containing input costs due to extraordinarily high taxes on diesel.
2. Integration of postal and railways network would greatly facilitate easier mobility for parcels, helping lead to One Station One Product
3. Will introduce 400 new generation Vande Bharat trains, as well as National Ropeways Development Plan as sustainable alternative to conventional roads.
4. With respect to efficiency in port operations, it has:
   a) Increased cargo handling capacity
   b) Reduced vessel turnaround time

A holistic and integrated transport connectivity strategy will greatly support Make in India and integrate different modes of transport.

17.13 Challenges

1. The COVID-19 pandemic has brought about large unemployment in the country and affected global markets and businesses. It would be challenging to ensure that a vast majority of the population is able to receive employment through the plan, to meet the lagging demand and supply of the markets.
2. Even after employment, capacity building and skill training would need to be imparted to ensure that they can meet global standards, India's workforce largely is within the informal sector, who may have limited training and education. This would hamper their chances for gaining skillful employment and increase the gap between white-collar and blue-collar jobs.
3. While the Central Government has announced a grand budget for the plan, ensuring infrastructure development and increasing India's manufacturing capabilities would still require investments from global groups. For eg, developing manufacturing hubs to meet global market demands for goods, or upgrading other sectors like aviation, technology, etc. would require huge investments.
4. Issues may arise from incompatible or hostile land acquisition to develop projects. While large projects require huge plots of land, the population and wildlife living within its vicinity may be affected. Alienation of people from their land may lead to socio-political issues as well as have consequences on the environment.

17.14 The Role of Logistics Division in PM Gati-Shakti

To achieve its mandate to develop and integrated cost-effective, reliable, sustainable, and digitally enabled logistics ecosystem in the country in coordination with the respective line Ministries/Departments, the role of Logistics Division will be as under:

a. Further develop and monitor the National Master Plan (NMP) in co- ordination with the respective line Ministries.
b. Operationalise the Network Planning Group (NPG) & the Technical Support Unit (TSU).
c. Handhold all stakeholders and provide capacity building on the use of the Monitoring Tools for updating and sharing data.
d. Identify projects which are vital or critical from multimodal connectivity point of view through Network Planning Group (NPG).
e. Coordinate for upgradation of the NMP portal from time to time and use the monitoring tools for review by the EGoS, NPG, and other stakeholders.
f. Act as Secretariat to the Empowered Group of Secretaries (EGoS) for its ToR.

The PM Gati-Shakti - National Master Plan provides an integrated platform where all the economic zone and their multimodal connectivity infrastructure have been depicted with an aim to boost the economic and overall development of the region. The same will provide physical linkages to promote comprehensive and integrated multimodal national network of transportation and logistics thereby enabling smooth transportation of goods, people, and services to create efficiency gains and avenues for further developments, value addition and creating employment opportunities.

The Plan holistically look at the interventions required to be taken for reduction in the cost of logistics like encouraging higher use of alternate fuels like LNG/methanol and rationalization of taxes/GST on improving procedures for seamless multimodal transport as well as consider transportation of high value items by air. It also looks at the interventions required to efficiently transport bulk goods based on the demand side requirement of various Ministries like Steel, Coal, Fertilizer etc.

The challenges being faced by the logistic sectors.

Few challenges being faced by the logistic sector o India are as follows:

i. **High Logistics Cost:**
India's Logistics cost approx. 14% of GDP. Transportation and Warehousing contributing more than 60% of the cost.

ii. **Performance in Global Rankings:**
India's Ease of Doing Business ranking (2019): 63, Logistics Performance Index (2018): 44 The ranking can be improved with an optimized logistics sector.

iii. **Standalone Digital Systems:**
Even though the departments serving logistics sector adopted the digitization, information flow between the systems is limited, making documentation and approval process very complex.

17.15 The Role of Indian Railways in the Prime Minister Gati-Shakti National Master Plan

Creation of the Gati-Shakti Directorate in the Railways

It has been decided to create a new Directorate namely 'Gati Shakti Directorate' by clubbing Plan Heads (PH)- 11, 14, 15, 16, 33, 35 & 81 presently dealt with by Works, Signal, RE Directorate into one Directorate as named above to bring synergy and to improve efficiency of the system so as to create additional rail infrastructure and thereby enhance railway market share in country's cargo loading and reduce logistic cost.

1. The new Gati Shakti Directorate is headed by AM/PED designated as AM/PED(GS). The composition and brief duty list of the Gati Shakti Directorate is enclosed at Annexure-I.

2.1 Gati Shakti Directorate will work with the existing strength of Works, RE and Signal Directorate and of Project Branch included in the Gati Shakti Directorate. Further strengthening

of Gati Shakti Directorate would be undertaken in due course as per need.

2.2 As regards, Financial Powers it would be in line with the extant instructions issued vide Office Order No. 01 of 2017 and the same procedure as enclosed at Annexure-II would be followed for Appraisal and Approval of Public Funded Umbrella Projects dealt with by Gati Shakti Directorate.

2. All proposals emanating from the Gati Shakti Directorate are being concurred by its own Associate Finance. For technical approval of the project under PH-33 & 35, the proposal now be routed through concerned AMS.

3.1 The Survey proposals/DPRs/Survey Reports after examination and concurrence of associate finance will be put up to Board through Board memorandum/Note and same will be presented to the Board, if required. The Board may approve or modify. Thereafter, proposal, if required, will be processed to Hon'ble MR as per the extant provisions.

4. The newly created Gati Shakti Directorate reports to Member Infrastructure, Railway Board. However, APAR of concerned EDs will be initiated by AM/PED (Gati Shakti), reviewed by concerned Board Member and accepted by CRB & CEO, Additional Member/RE will continue to report to Member Infrastructure regarding all policy matter and technical approvals of RE projects. ED/Electrical will report to AM/RE on these matters.

5. For implementation purpose, all the officers working in Gati Shakti Dte. will also work concurrently in their existing Directorate for other works listed in their subject list till the new system stabilize. The existing Directorate will mainly be involved in policy formulation in their subject matter, sanction, and monitoring of works other than Gati Shakti works, Parliament related works, RTI etc.

Composition and Board Duty List of Gati Shakti Directorate

1. The Directorate is headed by AM/PED (GS) and assisted by the other officers.

S.N.	Officers	Brief Duty List
I	AM/Principal Executive Director (PED)	Overall coordination including arranging meetings of the Expanded Board for Railways (EBR), Interface with all ministries including NITI Aayog, Ministry of Finance, Ministry of Statistics and Programme Implementation etc.
II	ED/GS (Civil 1) (IRSE) with 2 Directors	Appraisal and Sanctioning of Projects, Detailed estimate/Revised estimated, Sanction and examination of surveys, DPRs. Plan Head 11 – New Line Plan Head 13 – Gauge Conversion Plan Head 15 – Doubling Plan Head 16 – Traffic Facility
III	ED/GS (Civil 2) (IRSE) with 3 Directors	Progress & Monitoring of sanctioned Projects Plan Head 11 – New Line Plan Head 14 – Gauge Conversion Plan Head 15 – Doubling Plan Head 16 – Traffic Facility Plan Head 81 - Sanction and Progress, Monitoring of MTP Projects, State JVs
IV	ED/GS (Traffic) (IRSE) with one Directors	Scrutiny of survey reports, DPRs of New Line, GC, Doubling, Traffic Facilities from Traffic requirement and overall Planning perspective, recommending investment proposals (Planning). Prioritizing the works as per operational requirements.
V	ED/GS (Electical) (IRSE) with one Directors	Plan Head 35 – RE Works
VI	ED/GS (S&Tl) (IRSE) with one Directors	Plan Head 33 – S&T

VII	ED/GS (Finance) (IRSE) with one Directors	Associate Finance
VIII	Economic Adviser (IES) (Part-time)	For all projects
IX	Dy. CSC/GS (RPF JAG SG Officer)	Security related matters for all projects

2. Board functions of Gati-Shakti Directorate would be under:
   a. Planning and prioritization of projects related to Gati Shakti Directorate.
   b. Sanctioning of Survey Preliminary Engineering Technical Survey (PETS), Final Local Survey (FLS)
   c. Examination of Survey reports and Detailed Project Report (DPRs)
   d. Appraisal and Sanctioning of New individual works/Umbrella Works by Competent Authority depending upon the cost of project.
   e. Arranging meeting of the Expanded Board for Railways (EBR) and taking necessary actions thereafter Interface with NITI Aayog and Ministry of Finance, Ministry of Statistics and Programme Implementation.
   f. Preparation of the Cabinet Note for approval of the Cabinet Committee on Economic Affairs (CCEA) for projects.
   g. Sanction of detailed estimate, revised estimate including material modification.
   h. Audit of various projects if there are delays and bringing out reasons for taking corrective actions.
   i. Monitoring of the projects through Project Management Unit (PMU) Co-ordination with State and Central Government for Forest Clearance, Wildlife Clearance, Land Acquisition, Power Supply.
   j. ending review meetings regarding sanction/progress of railway projects being held by PMO, Cabinet Secretariat and

the concerned Ministries wherever required.

k. Dealing with all related Parliamentary matters, RTI and Standing Committees.

l. Policy matters related to project management, Gati Shakti initiative.

3. Some of the activities like preparation of reports, presentations liaisoning, co-ordination with various stakeholders etc, would be undertaken through outsourced staff by hiring young professionals through service contracts for Gati Shakti Directorate to assist the officers in their day to day working.

Financial Powers for Appraisal and Approval of Public Funded Umbrella Projects dealt with by Gati-Shakti Directorate.

Cost of the Project	IPA**	Appraised by	Approved by
Up to Rs. 100	MF*	MF	Chairman & CEO, RB
More than Rs. 100 Crore and up to Rs. 500	MF	Railway Board	Minister of Railways after examination and recommendation of Board
More than Rs. 500 Crore and up to Rs, 1000 crore	MF	NITI Aayog, Expanded Board for Railways chaired by CRB & CEO, RB	Minister of Railways
More than Rs. 1000 crore	MF	NITI Aayog, Expanded Board for Railways chaired by CRB & CEO, RB	Cabinet Committee on Economic Affairs

*MF- Member Finance

**In Principle Approval

Reference- Letter No. 2022/O&M/6/1 dated 26/05/2022 is issued and signed by B. Mjumdar, Joint Secretary, Railway Board

17.16 Operationalization of Gati-Shati Units in the Divisions

Gati Shakti Units have been operationalized all division of Indian Railways as per instructions issued dated 27.07.2022. The

following policy decision has been taken to ensure proper working of Gati Shakti Units and same to be ensured by the GM/DRMs.

1. It is decided that AGM should be uniformly nominated as Zonal coordinator (to be assisted by CPD/CE(SD)] for the Divisional Gati Shakti Units in the respective Zones:
2. House retention is allowed to the officer posted in Gati Shakti Units at the previous place of posting for one year or scholastic year whichever is earlier.
3. CPM/GS will be eligible for house retention at previous place of posting. Outstation CPM/C posted in field under CAO/C will also be eligible for house retention at previous place of posting on similar basis.
4. The CPM/GS and CAO/C units may engage project office support service agency/ General Consultants for technical support/assistance in office management.
5. This provision is in addition to PSSA (provision for works on BOQ basis) and PMS (provision for EPC contacts). The project office support service agency / General Consultants being deployed for office work also will assist the officers of Gati Shakti Units in coordination with the project specific PSSA/PMS within estimate provisions.
6. The Division Gati Shakti Units have already been permitted to engage retired Senior Supervisors below age of 65 years with approval of GMS.
7. GM/DRMs to ensure posting of JS/SS officer by suitably redistributing the work among officers of HQ, Divisions, Extra Divisional units and releasing surplus officer for posting in Gati Shakti Units. Care, however, has to be taken that officers and staffs in construction organizations who are executing major infrastructure projects are not depleted Wherever there is still shortage, retired JS/SS/JAG officers of age below 65 years can be engaged in Gati shakti units and construction organization

with approval of GMs. However, the number of such retired re-engaged officers can be limited to 2 (two) for each Gati Shakti Units and 5 (five) for each CAO/C Unit.

8. Fresh candidates from RRB have already been allotted to Zonal Railways. Board has also advised to GMs vide letter No. E(NG)/2022/TR/32 dated 24.08.2022 to depute adequate number of SSE/JE to CPM/GS and CAO/C Units GMs office to distribute these supervisors by name to CAO/C and CPM/GS of Divisions duly taking into account their requirements, in order to ensure that there is no delay in allocating this manpower for execution of projects.
9. It was noted that in a number of the Divisions, the CPM/GS and Dy CPMs are yet to be posted Most of the Electrical and S&T officers are posted on looking after basis This will hamper the works assigned to divisional Gati Shakti Units GMs may ensure posting of required officers in place duly redistributing the workload among available officers.
10. Exclusive JS/SS officer and section officer of Finance department may be posted to the extent possible in the Gati Shakti Unit. His/Her overall supervision will continue to be with Sr.DFM as per Para 1.7 of the letter dated 27.07.2022.
11. Like CPM/GS power for CPM/Const. also being utilize working in field. The provisions in Para 1, 2 and 3 above and powers given in letter dated 27.07.2022 can accordingly be utilized for CPM/Const posted in field.
12. The constitution of Tender Committees falls under the purview of Zonal Railway For uniformity among all Gati Shakti Unit of Divisions, GM may nominate SAG level T.C. for works cost above 20 crore & up to Rs.50 crore. Whenever SAG finance officer is not available locally, local JAG/SG finance officer may be nominated as per similar provision in para 3.1 of Model SOP, Part-D & Rly Bd. letter no 85/F(S) VPW/7/1 of 27-05-1987.

13. Network Planning Group (NPG) should be formed at Zonal HQ & Division level as advised vide letter no 2021/W-1/Genl/Gati Shakti dated 28.10.2022 to have synergy and integrated projects planning.
14. The transfer of works to Gati Shakti Units should be done judiciously by GMs keeping in view relative capacity of GSU and construction organization to execute the concerned work, to avoid delays in completion/targets. However, Amrit Bharat Station works which do not involve large scale upgradation, will be generally assigned to Gati Shakti Units of Division in view of day-to-day coordination with divisional officers during execution of such brown field works.

Reference: Letter no. 2021/W-I/Genl./Gati Shakti pt (e-3397961) dated 20.02.2023 is issued and signed by Mohit Kumar, Director Gati Shakti (Civil)-III, Railway Board

17.17 Issuance of policy for Gati-Shakti Multi-Cargo Terminal

A new policy has been issued to promote proliferation of new Cargo Terminals and improve existing Cargo Terminals to accelerate the growth in Railways' cargo traffic. All new as well as under-construction/ under-approval Cargo Terminals (approved/ proposed under Private Siding or Private Freight Terminal policies) shall be covered by this 'Gati Shakti Multi-Modal Cargo Terminal (GCT) policy.

Existing Cargo Terminals can migrate to this new GCT Policy by submitting a request to the Divisional Railway Manager (DRM) of the concerned Division of Railway, after clearing pending Railway dues and withdrawing all pending arbitration cases/ court cases, if any. The provisions of this Policy shall be applicable on such Cargo Terminals from the date the request is approved by the DRM.

The brief about the policy has been explained in Chapter 37- Good Sheds, Sidings and Freight Terminals.

17.18 Opening of Gati-Shakti Vishwavidyalaya by Indian Railways

Gati Shakti Vishwavidyalaya (GSV), a newly created Central University, is India's first University in the Transportation and Logistics sectors. The University offers a unique value proposition in applied education, training, skilling and research through experiential learning and academia-industry interface to build top quality manpower. Being an Industry-driven and Innovation-led University with a relevant mandate to significantly impact national development, the University has established and in process of establishing national and international collaborations across prestigious universities and leading industries.



FREIGHT OPERATION INFORMATION SYSTEM (FOIS)

18

In keeping with global trends, there has been a long outstanding demand of the industry and trade for transparency in sharing of information to give the customers an up-to-date business-like environment. Railways in this millennium have decided not only to perform the traditional tasks of carrying passengers and goods efficiently, but also to change the mindset of working as a closed system. The great concern to improve its market share has prompted Railways to adopt a multi-pronged approach to its freight policy.

Continuous Cargo Visibility has always been a critical component of the SupplyChain Distribution Management System. To achieve this, out of the stated multi-pronged new freight policy, a lot of emphasis has been laid on establishing a computerized FREIGHT OPERATIONS INFORMATIONS SYSTEMS (FOIS). The system indigenously developed is fully functional in the B.G. system of Indian Railways being the first of its kind in South East Asia. The objectives of computerization of

freight operation is as under:

1. enhancing the accuracy, reliability and timely availability of basic operating data pertaining to events in the field locations.
2. providing a wide range of information updated in 'real time' facilitating operating management for better planning, direction and control of freight operations and revenue accounting.
3. efficient scheduling and quick turnaround of rakes to enable effective and optimum utilization of the assets and resources.
4. facilitating acceptance of customers' orders, billing and cash accounting of freight traffic from identified nodal customer centers, which might not be the handling terminals; and
5. global tracking of consignments in real time and seamless availability of pipeline of consignments for timely planning and just in time inventory management.

18.1 Introduction and History of FOIS

Freight Operations Information System (FOIS) was initially sanctioned in 1983-84. The application software -Traffic Reporting and Control System- procured from Canada, customized as centralized application for FOIS at a cost of Rs.74.38 crore (up to March 1996) failed at the trial stage as an interface could not be established with the subsystems indigenously developed by the Centre for Railway Information System (CRIS) and was abandoned in 1996.

Subsequently, IR developed and implemented FOIS with the help of M/s Computer Maintenance Corporation (CMC) Limited and CRIS.

A prototype of FOIS application software comprising Rake Management System (RMS) and Terminal Management System

(TMS) was developed and implemented in Northern Railway in 2000. RMS covered various operational functions relating to routing, tracking and yard activities and had seven submodules while TMS covered the commercial activities pertaining to goods' sheds such as generation and accounting of Railway Receipts etc. and had 11 sub-modules. Subsequently, M/s CMC developed an upgraded production version of RMS and TMS to make it apposite of IR.

18.2 Challenges before implementation of FOIS

1. To automate the Freight Operations and Booking Activities viz. indenting, allotment, Rake Supply, loading, etc.
2. To digitalize the Freight commercial aspects viz. charges calculation & collection including rebates, demurrage, wharfage, incentives/discounts, issue of Railway Receipts and more.
3. To monitor the fleet of Indian Railway wagons, freight trains, locomotives and movement of freight trains across Station / Freight Loading Points, etc.
4. B2B Integration with other logistic partners for exchange of information.

To revolutionize the Indian Railway freight business by providing information for better decision making and efficient running, thereby improving the economic performance and competitiveness.

Goals

1. To make available accurate statistics regarding loading / earnings and freight.
2. To bring transparency in allotment of rakes for different Commodities through system generated allocation plan.
3. To supplement long term planning for increasing section / line capacity.

4. To provide continuous cargo visibility and instant access to information regarding status of consignments in transit to freight customers.
5. Seamless B2B Integrations with Internal applications viz. COA, ICMS, CMS etc. and sharing of data with external Chief Technology Officers also.

Mission

To give a total transparent system with continuous Cargo visibility and an up-to date business environment to the Customers with instant access to information regarding their consignments in transit for just in time inventory.

FOIS is an On-Line Real-Time system based on absolute current State of Art Technology and efficient Communication system. A management tool to optimize utilization of costly assets and resources by improving the distribution of Rakes/Wagons & Locos, and also scheduling and Routing Traffic in an optimized cost-effective manner.

Provides Continuous Cargo Visibility and enables the Freight customers to have instant access to information regarding the current status of their consignments in transit for just in time inventory.

The objective of FOIS System is to be a single comprehensive IT platform for complete freight operations / information on Indian Railways. This system covers mainly two modules viz. Rake Management System (RMS) and Terminal Management System (TMS) for capturing operating and commercial information across Indian Railways. In addition to these two modules, FOIS offers many more state-of-the-art solutions to bring convenience, transparency, ease of doing business and overall economic growth. Facilitates effective decision making through availability of timely

and accurate information.

18.3 The facilities in FOIS

1. **e-Registration of Indents**

   By introduction of e-Demand Module, today, the major customers have been provided an IT Window through FOIS which allows them to do so without visiting Goods Sheds and Railway clerks do not play any role in registration of indents or prioritizing of one's traffic over others.

   Introduction of e-Demand Registration module marked a new beginning with majority of freight customers booking their indents, anytime anywhere, through an easy-to-use interface in a more transparent manner.

   The applicable Wagon Registration Fee (WRF) is also realized through this module via secure IRCTC payment gateway. More than 43% of total indents are being captured through the system including almost 100% of Coal booking.

   The system provides convenience and ease of doing business by helping customers save the hassles of manual visits or interactions with concerned Railway staff.

2. **Electronic Transmission of Railway Receipt**

   Issue of Railway Receipt (RR) is an integral part of Indian Railways Freight Business, which is a legal document to be maintained by Railways and Customers from the time of loading of goods up to delivery and/or for the purpose of claims.

   As a practice, 4 copies of the Railway Receipt in 132 column pre-printed stationery need to be printed and preserved for years as record by Railways and Customer needs to transmit same in physical form from source to destination to take delivery of Goods.

   Electronic Transmission of Railway Receipt (eT-

RR) is a green initiative wherein Railway Receipts can now be digitally shared among stake holders and kept as records for Railways. It has been rolled out on PAN India basis. This initiative of process re-engineering in IR Freight business brings transparency and helps maintain the highest level of data security and audit trail in the system.

3. **Rake Permit Validation**

Rake Permits issued by Mining department of various State Governments were earlier required to be endorsed on the Railways Forwarding Note for placing the indent with Railways. As there was no digital record maintained at Railway Good sheds regarding the Rake Permits issued by State Govt. the same led to various frauds, manipulation of Rake Permits and multiple loading against single Rake Permit.

With integration of FOIS with Dept. of Mines of the State Government, an automated verification of Rake Permits issued by State Govts, has been possible and the manual endorsement of Forwarding Notes by Mining Departments is no longer required. This has brought in transparency in operations at large and curbed chances of frauds in the process, leading to reduction in illegal transportation of ores.

4. **Integration with CBEC**

As a policy all freight trains are expected to undergo a weighment process at originating station or en-route for correctness of weights declared by customer. This is also applicable for rakes carrying Import Containers.

Any discrepancy may result in increase of train dwell time and reduction in efficiency. Indian Railways, through FOIS, has established an Electronic Data Interchange (EDI) with Central

Board of Excise and Customs (CBEC) through which, detailed information including commodity and weight of all import containers is made available to FOIS.

Information of as many as 10,95,000 import containers is updated annually in FOIS by CBEC and is further validated against loading of same in Railway Wagons by container train operators. With the help of this active EDI, Railways has ensured that there is correct weight by Container Train Operators and incentivizes Customers by doing away with weighment of such trains. Thus, helping Railways curb any misuse of system by digitally collecting data and using it in its business process.

5. B2B integration with Banks

The freight charge, levied on all consignments varies based on numerous factors and Railway policies implemented from time to time. Payment of exact freight amount, which runs in lakh of rupees, has always been a challenge for customers and results in un-wanted delays in operations and charges incurred for arranging the same in the nick of time.

The involvement of manual interventions in commercial business may lead to corrupt practices. Indian Railways, through FOIS, has been able to implement a freight collection mechanism through a one of its kind payments processes wherein a customer, through one of the nationalized banks, authorizes Railway to directly debit the freight amount from his/her account and credit same in Railway account without user requiring authorizing each transaction. The facility is available to customers 24x7 and helps bring transparency and convenience.

6. Auto Rake Allotment and Allocation

Allotment of Rakes towards customer indents needs to be carried out as per Railway policy guidelines in a transparent and justified manner. However, since the process had been manual for years, the same has witnessed numerous complaints from esteemed freight customers.

To address the problem, Indian Railways, through FOIS, has devised an automated Rake Allotment System (RAS) for its Iron Ore Traffic. The IT System has been developed with all the rules of allotment pre-fed in the system and can be configured as per Railway policies by Administrator. The system auto generates the Allotment plan on daily basis based on IR network capacities and commitment of customers for the period. The allotment plan so generated is communicated back to customers through SMS and e-mail and also published on FOIS Website for public view.

Similarly, for Coal Traffic, the rakes allotted by authorities are being captured in the Rake Allotment System (RAS-COAL) and the Coal allotment along with Arrear of Coal Allotment detail is being published on FOIS Website. The system has brought in transparency and helps curb any malpractice in the trade.

7. Auto update of Consignment weight

Weighment of freight trains is a crucial operation for ensuring the health of Railway assets and maintain the efficiency.

Indian Railways, through FOIS, has established Electronic Data Interchange (EDI) with IT Applications of various In-motion weighbridges, exchanging data related to weight of bulk commodities carried in wagons. With minimum

human intervention in the process, accurate freight charging based on actual weight of goods being transported by Railways is accomplished.

This system of exchange is highly secure on dedicated network and has helped Railways in curbing any malpractices involved in weighment of Rakes and charging of Goods.

8. **Rail Sugam Mobile App**

An app for Indian Railway Freight Customers offering myriads of features including Consignment track and trace, booking information, freight calculator, terminals detail, Indents outstanding and maturity information, operating restrictions, performance dashboard and many more. The app is available for both Android and iOS customers through their respective app stores. App also provides contact details of key nodal officers for customers concerns.

18.4 Benefits of FOIS

1. **Continuous Cargo Visibility**
    1. Rake based consignment tracking and pipeline
    2. Invoice based loading – originating tonnage and revenues
    3. Information on trains on the run, the ETA at next point and the work tobe performed.
    4. Vehicle guidance of all trains on run
    5. Daily report describing the performance of all through trains operated in a controlled territory for the day
    6. Actual / estimated arrival and departure particulars for a particular train at any or all the reporting points.
    7. Yard or on the run delay information.
    8. Train and stock interchange

9. Wagon wise interchange

2. Optimized asset utilization

1. Improved locomotive utilization by reduction in light engine running and reduced ineffective
2. Statement of missing or wrongly delivered wagons and finally itselimination
3. Elimination of unconnected wagons
4. Increased availability of repair capacity
5. Stock holding
6. Loco holding

3. Increased revenue

Savings in wagon fleet would result in corresponding saving in the recurringcost of maintenance of wagons.

1. Reduced locomotive power and rolling stock maintenance cost.
2. Savings in time and cost of handling in yards, cost of empty haulage.
3. Ensures optimal crew management and monitors statutory limits forrunning duty and overtime payments.
4. Reduction in staff cost per unit of transportation due to improved productivity of the available manpower.

4. Improved productivity per man year.

Accuracy of reporting in the head and hand system collecting data on telephones results in sizeable error levels, which need to be reconciled and corrected periodically. FOIS data with built in validation systems has zero errors.

1. Drudgery of manual processes like maintenance of registers etc. is eliminated
2. Particulars of crew on train with hours spent on duty
3. Re deployment of major portion of staff involved in wagon tracing and accounts

checking activities.

4. Improved customer service and satisfaction.
5. Facilitation of acceptance (customer's order) billing and cash accountals from identified nodal customer services centers and not necessarily at thehandling terminals
6. E-Commerce will facilitate the customers to operate from their premises for the above requirement of the above billing and cash accountal and thus reduced the burden of logistic management, and in addition drastically bring down the inventory costs in the entire chain of physical distribution system.
7. Quick settlement of claims.
8. Just in time inventory

5. Goods Shed Operations.

1. Arrival particulars of wagons
2. Placement and Release Particulars
3. Information on demands registered and pending Indents
4. Preparation of Railway Receipts
5. Information on Demurrage and wharfage
6. Loading particulars
7. Goods Shed Earning
8. Information on delayed wagons and Wagons awaiting Placement /Release.

Other Benefit of implementation of FOIS are as under:

1. **Ease of doing business**
   Simplified logistic management by extending such facilities to customer premises and allotment of Rakes for loading is now visible to the Freight Customers
2. **Consignment Tracking**
   Provides continuous cargo visibility and instant

access to information regarding status of consignment in transit to freight customers. Global tracking of consignments in trains and wagons.

3. **Management tool**
   Integrated Freight Business Management tool to optimize utilization of costly assets and resources by improving distribution of rakes /wagons and locos and scheduling and routing traffic in a cost-effective manner.
4. **Freight KPIs Monitoring**
   Monitoring of Key Performance Indices to analyse Indian Railways freight business across different aspects. Operating and Commercial Performance monitoring for Freight Managers and overall business and operational efficiency indicators for freight customers through different application offerings, bringing transparency and ease of doing business.
5. **Information**
   Facilitates acceptance, billing, cash accountal of freight traffic from identified nodal customer centers which may not be handling terminals. Accurate and uniform operating information regarding loco, wagon, yard, terminal etc.
6. **EDI with Legacy Systems**
   Commercial and operating Information is shared to core Ministries of Govt of India and major freight customers to fuel their ERP systems. The partners are: Ministry of Shipping, Ministry of Power, NTPC, SAIL, ACC and many more. Bringing better coordination among all stakeholders including RAIL, COAL and POWER ministries.

Milestones

1. Rake Management System – 8000+ Locations
2. Terminal Management System – 3100+ Locations

3. E-Payment facility for freight services - 5 Nationalized & 2 Pvt Banks
4. Daily Wagon monitoring – 2.8 lakhs
5. Yearly Freight Loading - 1.2+ Billion Tonnes
6. Average Daily Freight Earning - 343 Crore

18.5 Scope of FOIS Systems

Presently two subsystems of FOIS are already in use after extensive field trials andvalidation.

RMS/TMS

a) Rake Management Systems – RMS

1. Rake based consignment tracking and pipeline
2. Train / Rake operation
3. Stock Holding in terms of summary of wagon types
4. Train and Stock Interchange
5. Terminal Handling performance
6. Loco holding, outage and power on-line
7. Reporting to take care of Train/Load on summary basis.
8. Invoice based consignment tracking
9. Wagon wise Stock Holding
10. Reporting of consist Wagon wise
11. Invoice based loading originating tonnage and revenues
12. Wagon wise Interchange
13. Statement of missing Wagons/wrongly delivered

b) Terminal Management Systems – TMS

1. Computerized booking and delivery of consignment
2. Station Accounting
3. RR generation / Transmission
4. Improved Customer Interface

c) Crew Management System

Crew Management has been developed & is under implementation. Control charting of trains currently being done manually will also be integrated with FOIS. The above two sub systems have been fully

developed and tested and are ready for implementation.

18.6 FOIS Design Architecture

FOIS is designed and developed in conformity with the state of art technology, which is scalable, maintainable, with open systems architecture and is based on the Indian Railways Organizational hierarchy, its present and future requirements. Based on the business processes that are being adopted, the business model developed in the FOIS – IT architecture is based on the assumptions: -

1. The current business practice of bulk movement in rake formation is the accepted norm for future also.
2. Around 85% traffic already moves in Rake, majority of which comprises similar type of rolling stock.
3. Global perception is more important, with respect of tracking of consignment and rakes rather than of individual wagon, locomotive and train.
4. The insight and pipeline of consignment and rakes should be seamlessly available. Railway would like to share information on booking and movement of consignments with individual customers also.
5. The operations and data capturing will remain control centric for train, rake, locomotive and stock management and terminal centric for booking, loading, unloading, and delivery. Taking into account the spatial distribution of activities, which need to be captured.
6. Integrity of Operation and Commercial data is an absolute necessity.
7. RMS and TMS applications are conceptualized, to provide integration with the other subsystems as and when these are developed.

FOIS ultimately expects an even driven integrated reporting in real time, beginning with the tendering of Forwarding note to loading

and generation of invoice, followed by load consists, train ordering and departure/arrival of load destination, unloading and delivery. The data thus captured is used for generating associated managerial reports on-line information (MIS).

FOIS System Architecture

The design conforms to the state-of-the-art client server technology using middleware and a Relational Data Base Management System (RDBMS). Application servers at the CRIS are networked and linked to a central database for global level transactions.

The central database acts as the repository of all current and historical data. The application is interface-ready for web-based services like connectivity to customers and e-payment gateway interface.

The hardware includes two Compaq/HP Alpha server ES-45, two Compaq/HP Alpha server DS-20 having RA-8000 storage system (3.2 TB storage space) with DAT drives, 16 ports SAN switch, personal computers (Client/Console machines), printers, UPS, Routers, Dial up modems, Switches, VSAT etc. System software includes Oracle 9.2.0 RBDMS as backend on TRU-64 UNIX 5.1B PK4 cluster platform with BEA Tuxedo 8.1 as middleware and Visual Basic as presentation layer, Pro-C as front end, PL-SQL for business logics and XML for MIS reports.

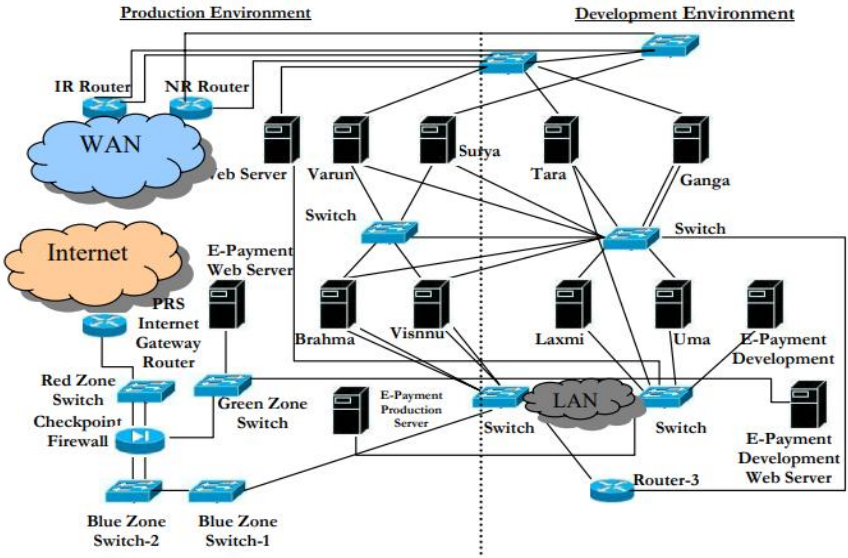
The FOIS network plan utilizes a mix of the available terrestrial network of IR, leased BSNL lines and a satellite network (V-SAT) to ensure reliability.

18.7 Application/Software

RMS module has been developed with GUI interface which is highly interactive, very user friendly. The software is totally menu driven and navigation is through logically linked tasks. The application and front-end forms for reporting events has been developed in Visual Basic and resides in the client machine

located at the reporting location. Date is stored in the central server locate at CRIS.

System architecture of FOIS



Intelligent terminals will be placed at the field locations to capture the data from the place of activity namely control offices, yards, goods sheds, C &W depot, Loco sheds etc., and connected to the identified Application Server through reliable communication links for transaction processing.

Application servers are centrally placed at CRIS office. These servers are connected to the Zonal Hd. Qtrs., Divisional Control Offices, Yards, interchange points and goods sheds etc., with a reliable and integrated network. The servers are networked amongst themselves and to the Central server for global level transactions.

The central server provides management Reports at board level and acts as repository of all the global data and also provides global services to maintain referential integrity of the databases including master files.

INRODUCTION TO TRAFFIC & COMMERCIAL STATISTICS

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These statistics are essential for planning prioritizing and executing activities connected with operation. The railway statistics are based on four factors -

a. Quantity
b. Distance
c. Duration and
d. Service.

In Railway environment these relate to –

19.1 Primary Units:

a) **Quantity –**
Expressed as tonnes and number of passengers carried and earnings derived.

b) **Distance –**
Expressed in kilometers.

c) **Duration-**
Expressed in minutes, hours & days.

d) **Service performed –**
Expressed in terms of trains, vehicles, wagons Engines.

Fundamental Units: Relationship between primary units, expressed in composite terms is called 'Fundamental units.'

The fundamental units express two primary ideas in their relationship to one another viz.

a. Tonne-kms,
b. Passenger kilometers,
c. Train-kilometers,
d. Wagon-kilometers,
e. Engine hours,
f. Wagon days etc.

Derived Units:

Expresses the relationship that exists between two sets of primary or fundamental units and the results thus arrived is termed 'Derived Units'. The process by which this relationship is ascertained is as illustrated in the following examples.

a) **Passenger earning (Primary):** Passenger carried (Primary = Earning per passenger
b) **Passenger earnings (Primary):** Passenger kilometers (fundamental) = Earning per passenger kilometer.
c) **Passenger kilometer (fundamental):** Number of passengers (Primary) = Average distance travelled by a passenger also called lead of passenger traffic.
d) **Wagon kilometers (fundamental):** Wagon days (fundamental) = Wagon kilometers per wagon day.

These 'Derived Units' highlight special features of transportation output and are useful in evolving suitable management strategies.

19.2 Classification of Railway Statistics

The principal heads under which the railway statistics are generally grouped are indicated below:

19.3 Economic and financial statistics

Under this head are to be included detailed statistics relating to the advance statement of gross earning and traffic handled i.e., the number of passengers booked, and tonnage lifted, and wagons loaded for current information and the statistics of revenue and

expenditure as booked in monthly and yearly accounts.

19.4 Operating statistics

Operating statistics are broadly be divided into five categories as under:

1. Traffic Statistics
2. Power Statistics
3. Rolling Stock Statistics
4. Commercial Statistics
5. Administrative statistics

1. **Traffic Statistics**
   The traffic statistics include statistics of wagons loaded, wagon mobility, wagon usage, train loads, train mobility, productive and unproductive services, wagon detention, marshalling yard, goods terminal, and punctuality.
2. **Power Statistics**
   The power statistics include engine usage, fuel and energy consumption, and engine failure statistics etc.
3. **Rolling Statistics**
   Rolling stock holding & availability, repairs & maintenance % age
4. **Commercial Statistics:** Coaching and freight revenue and volumes and earnings by class of passengers, for different commodities, claims paid for compensation of goods and parcels lost or damaged Rolling stock and workshop repair statistics:
   Under this head are grouped statistics dealing with POH of coaches, wagons, locomotives, and other information relating to workshop activity.
5. **Administrative statistics:**
   These statistics relating the staff matters, numbers, by categories and classes of staff.
   Other statistics like Number of stations by Class, halt stations Standard of interlocking, medical statistics

relate to sickness of staff etc.
Engineering statistics give details of track and bridges requiring attention – ultra sonic tests done or overdue, track renewals, distress bridges etc.

19.5 Compilation of Railway Statistics

Compilation of statistics of Indian Railways falls broadly under two categories, namely-

a) Statistics required to be compiled by the railways for submission to the Railway Board to keep the Railway Board informed about the different activities of the Zonal Railways and Indian Railways.
b) Railway statistics which individual railway may undertake for their own respective domestic requirements.

The statistical compilation work on the zonal Railways is in the charge of a Statistical Officer working under Finance department. The format and the methods of compilation of the monthly Statistical statements and the Annual Statistics required to be submitted to the Board are detailed in the Manual Statistical Instructions, Volumes I and II respectively.

Operating Statistics:

Operating Statistics for the various Railways are issued in the form of various pamphlets published periodically by the Railway Board. Detailed Statistics relating to each division and gauge are contained in various parts of the 'Domestic' statistics issued quarterly (Parts, I, II and II B & C).

19.6 Statistics on Passenger Train Performance.

Punctuality:

Punctuality is the main criterion for judging passenger train performance, some of the statistics compiled separately for 'Mail and Express trains', 'Other Passenger Trains', and 'Mixed' trains are:

$$\text{Punctuality} = \frac{\text{RT + NLT}}{\text{Total no. of Mail/Express trains}} \times 100$$

RT = Trains arriving Right Time at terminating point,

NLT = Trains not loosing time on division/zone

Vehicle Kilometers per Vehicles Day:

Vehicle Kilometers per Vehicles Day is indicated by the vehicle days which is the product of average number of coaching vehicles on line /in use and the number of days in the period under reference. This figure indicates the extent to which coaching vehicles are kept 'on the move'. The main factors affecting its value are:

(a) The average speed of trains
(b) The average length of train run (average load)
(c) The idle periods provided for in rake links.

Since in the short run, train composition is not susceptible to change, it is only by increasing the speeds of trains and tightening up rake links that an improved performance can be achieved.

This result is calculated by dividing the coaching vehicles kilometers by the vehicles days which is the product of average number of coaching vehicles online and the number of days in the period under reference.

$$\text{Vehicle km. per Vehicle day} = \frac{\text{Coaching Vehicle Km}}{\text{Vehicle day}}$$

Average Speeds:

Average Speeds represents the average time tabled speeds of passenger trains. The higher this figure, the better the service to the passengers.

Shunting Kilometers per 100 Train Kilometers (Passenger including proportion of Mixed):

1. Shunting Kilometers per 100 Train Kilometers indicates the amount of unproductive service that must be performed per 100 train kilometers (Passenger including proportion of mixed). Since the amount of shunting to be done on a passenger train depends upon various local factors, the figure

will vary from Division to Division and from Railway to Railway, traffic conditions remaining constant, is indicative of wasteful shunting.

2. Shunting Kilometers per 100 Train Kilometers is arrived at by multiplying by 100 the quotient of shunting kilometers divided by train kilometers (passenger including proportion of mixed). It can be depicted by formula given below: -

$$\frac{\text{Shunting Kms x 100}}{\text{Train kms.}}$$

19.7 Freight Statistics on Wagon Usage

Average Starting Wagon Load:

Average Starting Wagon Load was one of the most important indices when piece meal loading was frequent in Indian Railways. Now, most of the loading is in rake load and rarely in wagon load. However, for historical purposes, the average Starting Wagon Load was compiled separately for coal and coke, heavy merchandise, and light merchandise. The purpose behind maintaining this indices was that wagons should not be running under load. It is extremely important that wagons be given as full a load as possible because this means economy, in wagon usage and proper utilization of line capacity. Even a slight improvement in the starting wagon load can mean a tremendous saving to the Railway.

$$\text{Average Starting Wagon Load} = \frac{\text{Tonnes Loaded}}{\text{No. of Wagons Loaded}}$$

Wagon Kilometers per Wagon Day:

Wagon Kilometers per Wagon Day is a measure of wagon mobility and indicates the average number of kilometers moved by a wagon, on average, per day, both loaded and empty journeys being included. Delays in marshalling yards, delays at stations when loading or unloading, delays in clearance from roadside stations, decrease in average speed of goods trains, increase in the number

of wagons awaiting repairs, and shorter loads of trains are some of the factors normally responsible for poor mobility.

Wagon Kilometers per Wagon Day can be calculated by dividing wagon kilometers by wagon days which is the product of daily average number of wagons on line and number of days in period.

$$\text{Wagon Km. per Wagon day} = \frac{\text{Wagon Kms.}}{\text{Wagon Days}}$$

Net Tonne Kilometers per Wagon Day:

Net Tonne Kilometers per Wagon Day is a measure of the revenue earning work done by the wagons and reflects both mobility and loading. A decrease in this figure may be due interalia to any of the causes which affect the figure of wagon kilometers per wagon day. The proportion of loaded to total wagon kilometrage, the average loaded wagon and the relative amount of heavy and light merchandise carried, are some of the other factors which may affect this figure.

2. The numerator in this case is the net tonne kilometers (excluding departmental) and the denominator wagon days.

Net tonne km.per wagon day=Net tonne kms/ Wagon days

Wagon Turn Round:

This figure expresses the ratio between the total number of serviceable wagons on a Railway and the number of wagons required daily for effective use on the railway for its outward, inward and transshipment traffic. Stated in a different way, wagon turn round represents the average period in which a particular wagon completes its average loaded trip and after which it again becomes available for next loading or time interval between two successive loading.

$$\text{Wagon Turn Round} = \frac{\text{No. of effective wagon holding}}{\text{Wagons Loaded + Loaded wagons received}}$$

Average Wagon Load during the Run:

1. This unit is a good index of wagon utilization as it refers to the average load of all loaded wagons carried. It suffers from the draw back that it does not directly reflect the performance of the division, gauge, or

railway to which it applies, as only a proportion of the loaded wagons carried is loaded locally and the balance consists of both received traffic and cross traffic.

2. For obtaining this figure net tonne kilometers are divided by loaded wagon kilometers, (the figure relating to departmental trains are excluded).

$$\text{Average Wagon Load during the run} = \frac{\text{Net Tonnes Kms.}}{\text{Loaded Wagon kms.}}$$

19.8 Goods Trains Performance

Average Speed of Goods Trains:

This result is calculated separately for 'through goods trains' and all goods trains and is arrived at by dividing the total train kilometers by total train engine hours of the concerned service. Detentions to goods trains at roadside stations enter the calculations and have therefore the effect of bringing down average speeds.

$$\text{Average Speed of Goods Trains} = \frac{\text{Train kms.}}{\text{Train Engine hours.}}$$

Some of the factors on which the average speed of goods trains depends are:

(a) The proportion of the density of trains to the sectional capacity. The nearer a section is worked to its sectional capacity, the proper speeds obtained.
(b) Hauling power of the engines used, quality of coal and quality and adequacy of water supply, standard of maintenance of engines and time taken by loco pilots for loco requirements.
(c) Loads of trains.
(d) Condition of rolling stock, particularly the brake power available.
(e) Standards and maintenance of signalling and interlocking.

(f) Facilities at water stations, facilities at roadside stations to complete shunting in the minimum time and shorter block sections which will increase the sectional capacity.

(g) Engineering restrictions – permanent and temporary gradients and curves.

Average Net Train Loads (in tonnes):

Average Net Train Loads refers to the average freight load carried in tonnes, i.e., to that portion of load which earns revenue for the railway.

$$\text{Average Net Train Loads} = \frac{\text{Net Tonne kms.}}{\text{Train kms.}}$$

Average Gross Train Loads (in tonnes):

Average Gross Train Loads represent the average overall load of goods trains i.e. the freight load plus the weight of the rolling stock.

$$\text{Average Gross Train Loads} = \frac{\text{Gross Tonne kms.}}{\text{Train kms.}}$$

The principal factors affecting this figure are:

1. The tractive capacity of engines on goods train services.
2. The gradients on various sections of the line.
3. The nature of goods carried.

Shunting Engine Kilometers per 100 Train Kilometers:

Shunting Engine Kilometers per 100 Train Kilometers indicates the amount of non-revenue earning work done per 100 train kilometers (Goods and proportion of mixed). Its value is affected mainly by the load of goods trains, and the amount of terminal work involved.

$$\text{Shunting Engine kms. per 100 Train kms.} = \frac{\text{Shunting kms. x 100}}{\text{Train kms.}}$$

However, for the same division or/railway, the pattern of traffic remaining the same, rise in this figure is indicative of wasteful shunting.

Net Tonne Kilometers per Engine Hour:

Net Tonne Kilometers per Engine Hour is a very useful index of the efficiency of freight working on a division. Net tonne kilometers

indicate the amount of revenue earning work done while engine hour measure the cost of if doing it.

$$\text{Net Tonne Kilometers per Engine Hours} = \frac{\text{Net Tonne kms.}}{\text{Engine hours}}$$

A decrease in net tonne Kilometers per engine hour may be due to factors such as:

1. Shunting engine hours not using cut down in proportion to the decrease in traffic offering.
2. Increase in departmental, assistance required, assistance not required and light engine running.
3. Decreas in the average number of train and or the average speed of goods train.
4. Decrease in the average starting wagon load or in the wagon loads of wagons received from other divisions.
5. Increase in the proportion of unbalanced traffic.
6. The type of traffic carried heavy or light.

Average Detention per Wagon:

1. All wagons
2. Through loaded wagons:

Detention suffered by stock in a yard depends, interalia, on the layout of the yard and on the number of trains per day that can be dispatched in various directions. Target figures have been laid down for each yard for detentions to all wagons and through loaded wagons. Such targets take into consideration the condition of work and facilities available in the yard concerned. Detentions in excess of this figure indicate inefficient yard work. Lesser detentions mean lesser cost of handling wagons in yards.

$$\text{Average Detention per Wagon} = \frac{\text{Total Detention Hours}}{\text{No. of Wagons dispatched}}$$

Number of Wagons Dealt with per Shunting Engine Hour:

The number of wagons that a given yard can deal with per shunting hour depends, interalia, on its layout Accordingly a target figure has been prescribed for each yard to enable the efficiency of yard work

to be gauged. As shunting involves cost, the higher this result, greater the efficiency of the yard.

$$\text{No. of wagons dealt with per shunting engine hour} = \frac{\text{No. of Wagons dealt with}}{\text{Shunting Engine hours}}$$

19.9 Locomotive Performance

Engine Kilometers per Day per Engine in Use:

This figure is compiled separately for passenger, mixed and goods train services as well as for all services refers to 'engines in use'. This is affected by such factors as:

1. The average run of trains.
2. The average speed of trains.
3. The engine links
4. The location of the engine shed with respects to the stations which they serve.

$$\text{Engine kms. per day per engine in use} = \frac{\text{Engine kms.}}{\text{Engine days in use}}$$

Engine Kilometers per Day per Engine on Line:

This figure is also compiled separately for passenger,gooods or mixed services and for all services put together. The proportion that this figure bears to the corresponding figure of 'engine kilometers per engine day per engine in use' indicates the proportion of available engines 'on line' that were put to effective use during the period in question.

$$\text{Engine kms. per day per engine on line} = \frac{\text{Engine kms.}}{\text{Engine days on line}}$$

Quantity of Fuel Consumed per Engine Kilometre by Service:

This figure indicates the fuel consumption in relation to engine kilometers only and does not reflect the tonnes hauled.

$$\text{Quantity of fuel consumed per engine km by service} = \frac{\text{Quantity of Fuel Consumed}}{\text{Engine kms.}}$$

Quantity of Fuel Consumed per 1000 Gross Tonne Kilometers by Services:

This figure indicates the fuel consumption in relation to the work done and is, therefore, a better index of fuel consumption than the quantity of fuel consumed per engine kilometer figure. The main factor that influences this result is the gross load of the train.

In case of diesel locos, specific fuel consumption (SFC) has been measured and derived by the formula:

$$\frac{\text{Quantity of Fuel Consumed}}{\text{Gross Tonne kms.}} \times 1000$$

In case of Electric loco Specific Energy Consumption (SEC) has been measured by -

Traction Energy consumption per engine km and per 1000 gross tonne kms is worked out exactly in the same way, replacing 1000 litres of diesel by kwhs.

Operating Ratio:

Operating Ratio is the ratio of the total working expenses excluding suspense but including appropriations to DRF and Pension fund, bear to its gross earnings. In other words, it represents the percentage of Working Expenses to Total Earnings.

$$\textbf{Operating Ratio} = \frac{\text{Gross Working Expenses} \times 100}{\text{Gross Revenue Receipts}}$$

Operating Ratio has been regarded as one of the most important financial statistics and has frequently been used as an index of the operating efficiency of a Railway. This ratio continues to be worked out from year to year and is reflected in the accounting system. In comparing the ratio of one year with another of the same Railways, great care must be taken to see that the terms "Working expenses" and "Gross earnings" are clearly defined and that the figures have been compiled on the same basis. The object of a Railway Administration is to keep this ratio as low as possible consistent with efficient working and good maintenance; it will tend to fall with efficient working, increase of traffic and fall in expenditure.

DEDICATED FREIGHT CORRIDORS (DFCCL)

20

Today the Indian Railways have mixed corridor where both Mail/Express/Passenger trains share the same track with the freight trains and although, it is the freight traffic which is the bread and butter, the Mail/Express/Passenger trains invariably take precedence over the freight trains. As a result, the average speed of freight trains is relatively low. The average speed of the freight trains on Indian Railways is approx. 23.6Kmph, and this has an adverse impact on Indian Railway's performance and competitiveness.

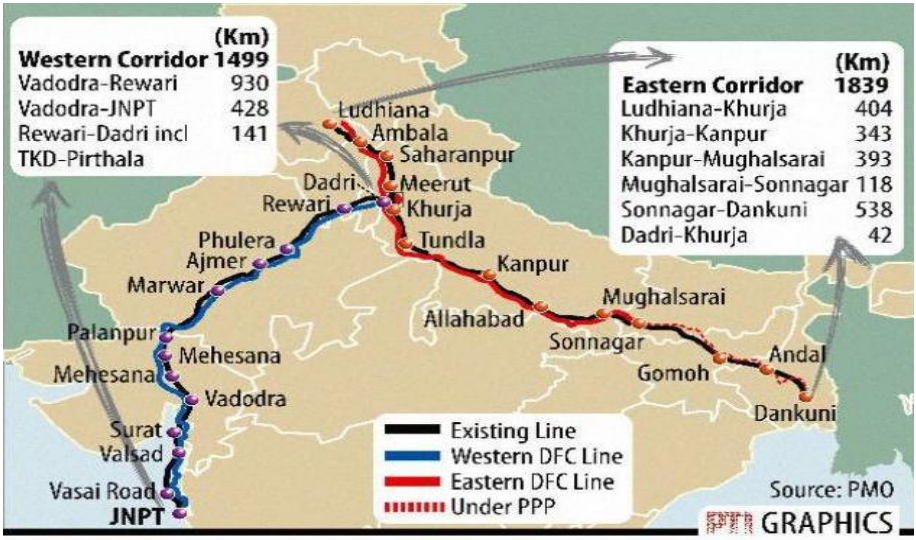
It is a fact that freight tariff on the Indian Railway is also one of the highest in the world. This translates into higher supply chain costs which in turn results in loss of competitiveness of Railway in the market. Therefore, it is imperative to augment rail capacity so that increased demand for freight transport with growth in economy is met. Indian Railways considered following three options:

1. Augment the existing network by laying quadrupled lines.
2. Create a separate Dedicated Passenger Corridor
3. Create a separate Dedicated Freight Corridor

The large-scale augmentation of capacity of the existing network was not considered practical as it would have led to large scale dislocation to the running traffic, as well as land acquisition issues, particularly in and around urban centers. More so, it would have remained a mixed corridor with track structure unsuitable for carriage of higher axle load traffic and also restricted schedule of dimensions of the fixed structures like Road Over Bridges and others.

It was not considered prudent to go in for a new Dedicated Passenger Corridor on account of the fact that it would have been prohibitively expensive because it had to pass through the urban/city centers to cater to the passenger need and would have required grade separation in terms of longer and higher flyovers due to paucity of space, not only from the existing rail network but also through the congested road network in the urban/city centers. Passenger tariff, being relatively low in India, would have made the proposal financially unviable. Moreover, the limitation of lower axle load and restrictions on account of schedule of dimensions of fixed infrastructure would have remained with the freight operation.

Taking above factors into consideration and recognizing the need for a quantum leap in the Railways' transportation capacity to meet transport requirement for sustainable growth in the national economy, the Ministry of Railways has embarked upon a long-term strategic plan to construct high-capacity, high-speed Dedicated Freight Corridors along the golden quadrilateral and its diagonals.



It will not be out of place to mention that the Golden Quadrilateral and its diagonals constituting 10122 Km is, in fact, back bone of the Indian Railways total Kms because this is contributing more than 60 % of the freight traffic and 52 % of the passenger traffic carried by IR. These routes serve the core sectors of the Indian economy by carrying raw materials to the plants and finished products to centers of consumption, manufacturing, and trade. If this DFC is not made, then the achieving of the projected GDP growth would not be possible.

20.1 Incorporation of Dedicated Freight Corridor

To implement the Dedicated Freight Corridor project and thereafter to operate and maintain the Dedicated Freight Corridors (DFCs), the Ministry of Railways decided to set up a SPV and accordingly the Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL), a fully owned company of Ministry of Railways under the Companies Act, 1956 has been set up on 30th Oct 2006. The Dedicated Freight Corridor is the most ambitious and biggest project ever undertaken in the railway infrastructure sector in the

country.

With the Dedicated Freight Corridors, the Indian Railways aim to bring about a paradigm shift in freight operation with prime objective of reduction in unit cost of transportation with higher speed of freight trains, better turnaround of wagons and thereby much improved wagon productivity in terms of improved ton-km per wagon day, increased payload to tare ratio by introduction of higher axle load wagons on the rail network, improved locomotive utilization and improved specific fuel consumption. The ultimate objective is to reduce the Operation and Maintenance Cost (O&M Cost) significantly and in penultimate analysis the benefit is passed on to the customer in the form of lower transport Logistics Cost.

20.2 Introduction of Dedicated Freight Corridor:

Vision

To create a partnership with IR for retaining and expanding the market share of rail through efficient and reliable service with customer focus.

Mission

As the dedicated agency to make the vision into reality, DFCCIL's mission is

i. To build a corridor with appropriate technology that enables Indian Railways to regain its market share of freight transport by creating additional capacity and guaranteeing efficient, reliable, safe and cheaper options for mobility to its customers.
ii. To support the Government's initiatives toward ecological sustainability by encouraging users to adopt Railways as the most environmentally friendly mode for their transport requirements.

Motto

Sincerity, Speed and Success

Objectives

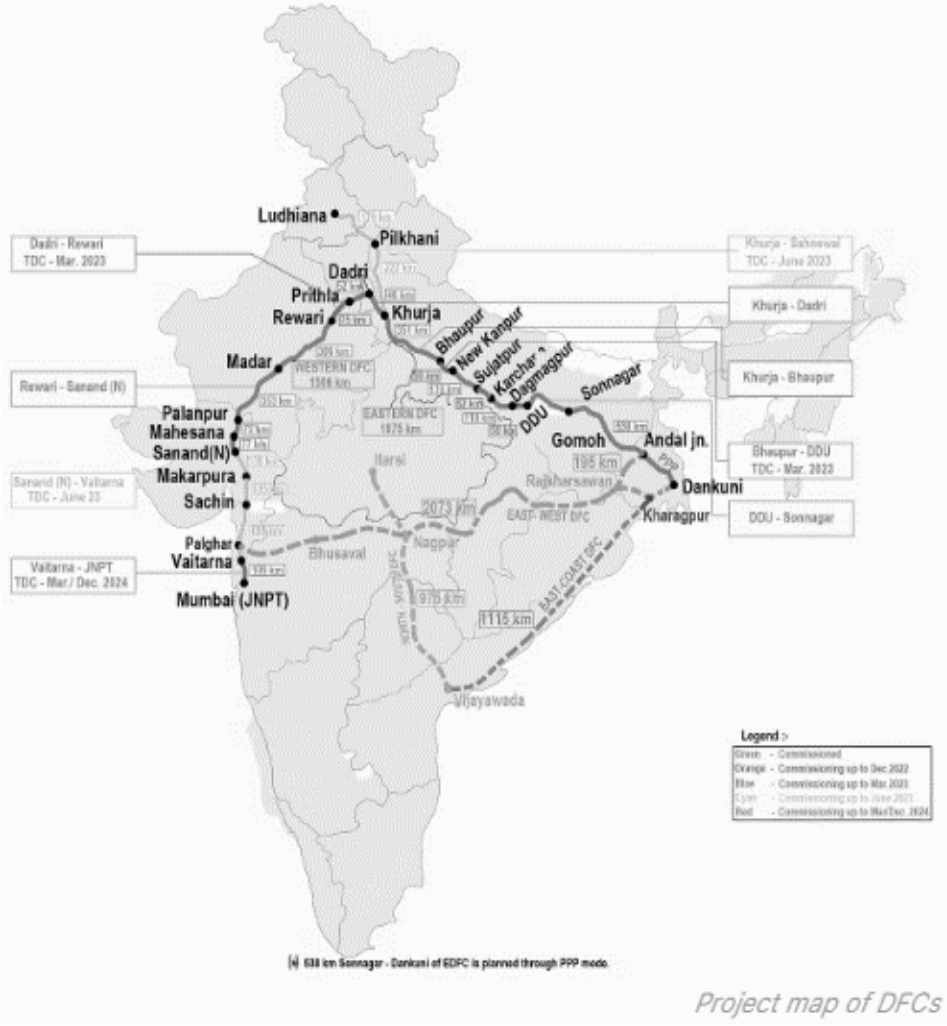
The main objectives of DFCCIL are:

(a) **Project Delivery:** To construct the dedicated freight corridor network to the highest quality standards, within the budgeted timelines and costs.

(b) Operation and Maintenance

(i) **Additional line Capacity**: To make additional line capacity available to IR for running freight trains and assure safe and reliable train operations.

(ii) **Reduction in cost of operations:** Achieve significant reduction in the cost of operations by adopting international best practices including long haul/heavy haul operations.



Eastern and Western Corridor of DFCCIL

20.3 Features of Dedicated freight corridor

Dedicated Freight Corridors are proposed to adopt world-class and state-of-the-art technology. The DFC under implementation will have the following features:

1. **Signalling and Telecommunication**
   - Sophisticated train protection and warning systems
   - Centralized train management system
   - Global system and mobile communications for railways
2. **Civil Engineering**
   - Mechanized track laying
   - Higher axle loads
   - Modern crossings/ turnouts
   - Friction buffers stop to enhance the safety
3. **Other Features**
   - GPS-based real-time tracking system
   - Modern Supervisory Control and Data Acquisition (SCADA) and protection system
   - Computer simulation tools
4. **Impact of Dedicated Freight Corridor (DFC)**
   - DFC is likely to provide timetable-based freight services.
   - Maximum container rake load on DFC - 360 TEUs as opposed to 90TEUs at present.
   - General rake load on DFC - 13000 M T as opposed to 3500 MT at present.
   - Cost of operations on DFC will be about 45 paise per ton-Km as compared to the present cost of 95 paise per ton-Km.
   - Eastern Dedicated Freight Corridor will meet Western Dedicated Freight Corridor at Dadri.

20.4 Comparison of DFC route with existing route

Feature	Existing IR track	DFC track
Heavier Axle Loads		
Axle Loads	22.9t/25t	25t Bridges and formation designed for 32.5t

Track Loading Density	8.67t/m	12 t/m
Maximum Speed	75 kmph	100 kmph
Grade	Up to 1 in 100	1 in 200
Curvature	Up to 10 degree	Up to 2.4 degree
Traction	Electrical (25 KV)	Electrical (25 KV at Feeding)
Station Spacing	7-10 km	40 km
Signaling	Absolute/Automatic with 1 km spacing	Automatic with 2 km spacing
Communication	Emergency Sockets/ Mobile Train Radio	Mobile Train Radio
Moving Dimension		
Height	4.265 m	7.1 m for Western DFC 5.1m for Eastern DFC
Width	3200 mm	3660 mm
Container	Single Stack	Double Stack
Train Length	700 m	1500 m
Train Load	5000 Ton	13000 Ton

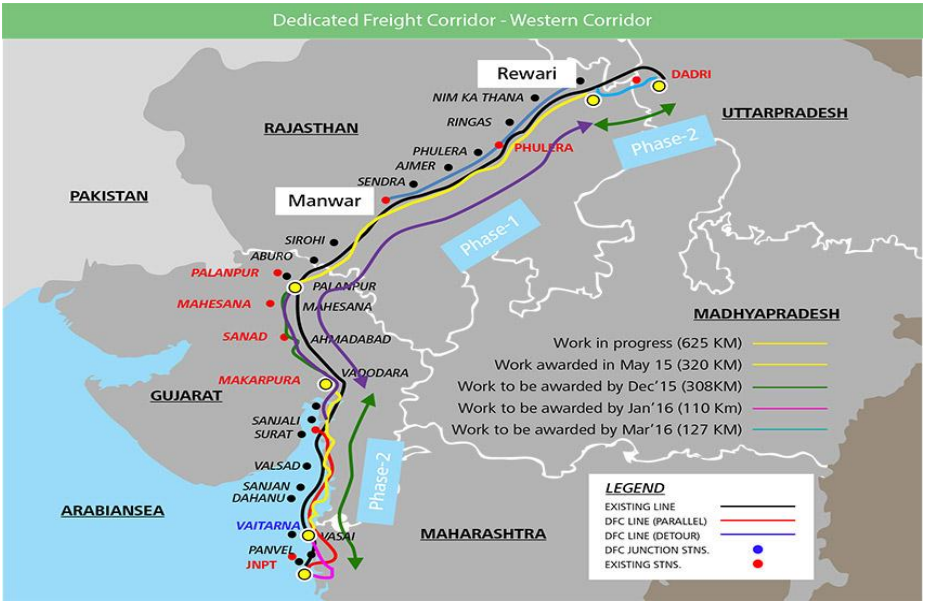
20.5 Western Corridor:

Western Corridor comprises 1504 km of a double line electrified track from JNPT to Dadri via Vadodara-Sanand-Palanpur-Phulera-Rewari. Alignment has been generally kept parallel to existing lines except provision of detours and entirely on a new alignment from Rewari to Dadri and also from Sanand to Vadodara. This new line portion of DFC is designed to connect with existing New Delhi - Mathura line at Asaoti railway station from Pirthala station of DFC. Moreover, the Western DFC is proposed to join Eastern Corridor near Dadri.

Western DFC (1504 KMs)	
Haryana	191
Rajasthan	561
Gujarat	552
Maharashtra	183
Uttar Pradesh	17
Total	1504

The traffic on the Western Corridor mainly comprises of ISO

containers from JNPT and Mumbai Port in Maharashtra and ports of Pipavav, Mundra and Kandla in Gujarat destined for ICDs located in northern India, especially at Tughlakabad, Dadri and Dandharikalan. Besides Containers, other commodities moving on the Western DFC are POL, Fertilizers, Food grains, Salt, Coal, Iron & Steel and Cement. Further, owing to its faster growth as compared to other commodities, the share of container traffic is expected to progressively increase and reach a level of about 70.5 million tonne in 2023-24. The maximum number of trains in the section is projected as 230 trains (both in UP and DN) in Ajmer-Palanpur section in the year2024.



20.6 Eastern Corridor:

The existing trunk routes of Howrah-Delhi on the Eastern Corridor and Mumbai-Delhi on the Western Corridor are highly saturated, with capacity utilization varying in the range of 115 per cent to 150 per cent. Though the four routes that form the Golden

Quadrilateral - connecting Delhi, Mumbai, Chennai, and Kolkata together with two diagonals (Delhi – Chennai and Mumbai – Kolkata), account for hardly 16 per cent of the railway network's route length, they carry more than 55 per cent of total rail freight of India. Apart from this, the National Highways along these corridors, comprising 0.5 per cent of the road network, carry almost 40 per cent of the road freight.

The Eastern Corridor with a route length of **1861**km, consist of the following distinct segments:

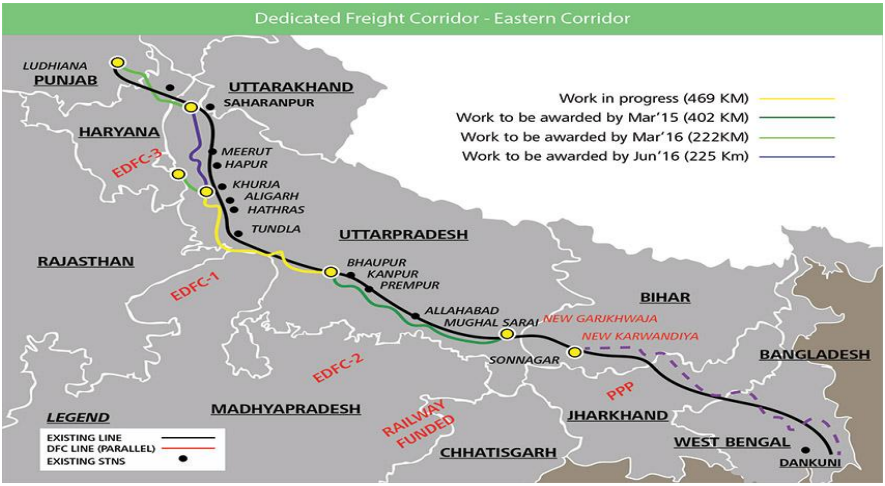
i. An electrified single line segment of 401 km between Ludhiana and Khurja.
ii. An electrified double line segment of 46km between Khurja and Dadri.
iii. An electrified double line segment of 351km between Khurja and Kanpur
iv. An electrified double line segment of 402 km between Kanpur and Mughalsarai
v. An electrified double line segment of 126 km between Mughalsarai and Sonnagar.
vi. An electrified double line segment of 535km between Sonnagar to Dankuni.

Due to non-availability of space along the existing corridor particularly near important city centres and industrial townships, the alignment of the corridor will take detour at several locations. Since the origin and destination of sizable volume of traffic do not necessarily fall on the DFC, a number of junction arrangements have been planned to transfer traffic from the existing Indian Railway corridor to the DFC and vice versa. The junctions on the Eastern Corridor are planned at Chawapail, Sirhind, Sambhu, Kalanaur, Pilkhani, Boraki, Khurja, Dadri(E), Daudkhan, Tundla, Bhaupur, Bhimsen, Kanpur, Karchchna, Ahraura Road, Mughalsarai, Ganjkhwaja, Sonnagar, Chiraillapatu, Gomoh,

Andal(W), Andal, Andal(E), Khana and Dankuni. For phase-I opening of the section,temporary junctions are planned at Karwandiya, Sasaram and Durgawati.

Eastern DFC (1861 KMs)	
States	KMs
Punjab	**88**
Haryana	**72**
Uttar Pradesh	**1063**
Bihar	**239**
Jharkhand	**196**
West Bengal	**203**
Total	**1861**

The traffic on the Eastern Corridor mainly comprises of coal for the power plants in the northern region of U.P, Delhi, Haryana, Punjab and parts of Rajasthan from the coal fields situated in Eastern part of the country, finished steel, food grains, cement, fertilizers, limestone to steel plants and general goods. The total traffic in UP direction& DN direction is projected to go up to224 million tonnes in 2023-24. The number of trains with 25 tonne axle load works out to a maximum of about 163 trains in both UP and DN direction in Sonnagar-Mughalsarai section of the Eastern Corridor.



20.7 Future Dedicated Freight Corridor

Hon'ble MR has announced in his speech Budget in 2016 to take over the three new Dedicated Freight Corridors. These are: -

1. East –West Corridor (Kolkata – Mumbai) approx. **2328 Km.**
2. North – South Corridor (Delhi – Chennai) approx. **2327Km.**
3. East Coast Corridor (Kharagpur – Vijayawada) approx. **1114 Km**
4. Southern Corridor (Madgaon - Ankola-Rinigunta) approx.**893**



Freight Trains running in DFC Corridor

INTRODUCTION OF DATA ANALYTICS, ITS COMPARISON WITH BUSINESS ANALYTICS AND ITS APPLICATION IN RAILWAY OPERATION

21

Big data is transforming and powering decision-making everywhere. From large enterprises to higher education and government agencies, data from a plethora of sources is helping organizations expand their reach, boost sales, operate more efficiently, and launch new products or services.

To make sense of all this data and use it to be more competitive, companies must apply both business analytics and data analytics. There's often confusion about these two areas, which can seem interchangeable.

21.1 Overview of Data analytics with Business analytics

Both data analytics and business analytics involve working with and manipulating data, extracting insights from data, and using that information to enhance business performance. So, what are the fundamental differences between these two functions?

Data analytics

Data analytics involves combing through massive datasets to reveal patterns and trends, draw conclusions about hypotheses, and support

business decisions with data-based insights. Data analysis attempts to answer questions such as, "What is the influence of geography or seasonal factors on customer preferences?" or "What is the likelihood a customer will defect to a competitor?". The practice of data analytics encompasses many diverse techniques and approaches and is also frequently referred to as data science, data mining, data modelling, or big data analytics.

Business analytics

Business analytics focuses on the larger business implications of data and the actions that should result from them, such as whether a company should develop a new product line or prioritize one project over another. The term business analytics refers to a combination of skills, tools, and applications that allows businesses to measure and improve the effectiveness of core business functions such as marketing, customer service, sales, or IT.

21.2 Understanding data analytics.

Data analytics is the process of collecting and examining raw data to draw conclusions about it. Every business collects massive volumes of data, including sales figures, market research, logistics, or transactional data. The real value of data analysis lies in its ability to recognize patterns in a dataset that may indicate trends, risks, or opportunities. Data analytics allows businesses to modify their processes based on these learnings to make better decisions. This could mean figuring what new products to bring to market, developing strategies to retain valuable customers, or evaluating the effectiveness of new medical treatments.

Most commonly used data analysis techniques have been automated to speed the analytical process. Thanks to the widespread availability of powerful analytics platforms, data analysts can sort through huge amounts of data in minutes or hours instead of days or weeks using:

1. **Data mining:**
   Data mining involves sorting through large data sets to identify trends, patterns, and relationships.
2. **Predictive analytics:**
   Predictive analytics aggregates and analyzes historical data to help organizations respond appropriately to future outcomes like customer behavior and equipment failures.
3. **Machine learning:**
   Machine learning uses statistical probabilities to teach computers to process data faster than conventional analytical modeling.
4. **Big data analytics:**
   Big data analytics applies data mining, predictive analytics, and machine learning tools to transform data into business intelligence.
5. **Text mining:**
   Text mining Spots patterns and sentiments in documents, emails, and other text-based content.

As more organizations move their critical business applications to the cloud, they are gaining the ability to innovate faster with big data. Cloud technologies create a fast-moving, innovative environment where data analytics teams can store more data and access and explore it more easily, resulting in faster time to value for new solutions.

21.3 Understanding Business Analytics

Business analytics (BA) is the iterative exploration of an organization's data, with a focus on applying statistical analysis techniques to reveal information that can help drive innovation and financial performance. Analytics-driven organizations treat big data as a valuable corporate asset that fuels business planning and supports future strategies, and business analytics helps them get maximum value from this goldmine of insights. There are three main kinds of business analytics —

1. Descriptive,
2. Predictive,
3. Prescriptive.

These are usually implemented in stages and together can answer or solve just about any question or problem a company may have.

1. **Descriptive analytics**
   Descriptive analytics answer the question, 'What has happened?" This type of analytics evaluates historical data for insights on how to plan for the future. Thanks to the widespread availability of self-service data access and discovery tools and dashboards, executives and non-technical professionals can reap the benefit of insights generated by big data to improve business performance.
2. **Predictive analytics**
   Predictive analytics is the next step on the path to insight. It uses machine learning and statistical techniques to help businesses anticipate the likelihood of future events. However, because predictive analytics is probabilistic in nature, it cannot actually predict the future; it can only suggest the most likely outcome based on what

has happened in the past.

3. **Prescriptive analytics**
   Prescriptive analytics explores possible actions to take based on the results of descriptive and predictive analysis. This type of analytics combines mathematical models, and business rules to optimize decision making by recommending multiple possible responses to different scenarios and tradeoffs.

Organizations may use any or all of these techniques, though not necessarily in this order. Business analytics can be implemented in any department, from sales to product development to customer service, thanks to readily available tools with intuitive interfaces and deep integration with many data sources. Many of these solutions offer users the ability to apply advanced analytic models without the help of a data scientist, creating new opportunities to find hidden insights in large datasets.

Business analytics requires adequate volumes of high-quality data, so organizations seeking accurate outcomes must integrate and reconcile data across different systems, then determine what subsets of data to make available to the business.

21.4 Comparison of Data analytics with Business analytics

Most people agree that data and business analytics share the same end goal of applying technology and data to improve business performance. In a data-driven world where the volume of information available to organizations continues to grow exponentially, the two functions can even work in tandem to maximize efficiency, reveal useful insights, and help businesses succeed.

This side-by-side comparison should help clear up some of the confusion between business and data analytics.

	Business Analytics	Data Analytics
Goal	Focuses on identifying trends in the organization that can be optimized to improve overall business planning and performance. Supports continuous improvement in technology and processes. Seeks to arrive at a single version of the truth.	Benefits come from recognizing patterns in a dataset and making accurate predictions based on events.
Data	Data sources are defined in advance based on project goals.	Analysis is more ad hoc with data sources added on the fly as correlations are uncovered.
Approach	Involves defining the goals and requirements for programs and projects. More retrospective and descriptive.	Typically, more predictive and prescriptive. Strives to answer specific questions and discover new insights for competitive advantage.
Team members	CIO, CDO, analytics manager, business analyst, data warehouse engineer	Data analyst, line of business manager

21.5 Big Data Analytics, its process, and techniques

Big data describes large sets of diverse data—structured, unstructured, and semi-structured—that are continuously generated at high speed and in high volumes. Big data is typically measured in terabytes or petabytes. One petabyte is equal to 1,000,000 gigabytes. To put this in perspective, consider that a single HD movie contains around 4 gigabytes of data. One petabyte is the equivalent of 250,000 films. Large datasets measure anywhere from hundreds to thousands to millions of petabytes.

Big data analytics is the process of finding patterns, trends, and relationships in massive datasets. These complex analytics require specific tools and technologies, computational power, and data storage that support the scale.

1. Data analytics converts raw data into actionable insights. It includes a range of tools, technologies, and processes used to find trends and solve problems by using data.
2. Data analytics can shape business processes, improve decision-making, and foster business growth.

3. Data analytics helps companies gain more visibility and a deeper understanding of their processes and services.
4. It gives them detailed insights into the customer experience and customer problems.
5. By shifting the paradigm beyond data to connect insights with action, companies can create personalized customer experiences, build related digital products, optimize operations, and increase employee productivity.

21.6 The process of big data analytics

Big data analytics follows five steps to analyze any large datasets:

1. Data collection
2. Data storage
3. Data processing
4. Data cleansing
5. Data analysis

1. Data collection

This includes identifying data sources and collecting data from them. Data collection follows ETL or ELT processes.

ETL – Extract Transform Load

In ETL, the data generated is first transformed into a standard format and then loaded into storage.

ELT – Extract Load Transform

In ELT, the data is first loaded into storage and then transformed into the required format.

2. Data storage

Based on the complexity of data, data can be moved to storage such as cloud data warehouses or data lakes. Business intelligence tools can access it when needed.

A data warehouse is a database optimized to analyze relational data coming from transactional systems and business applications. The data

structure and schema are defined in advance to optimize for fast searching and reporting. Data is cleaned, enriched, and transformed to act as the "single source of truth" that users can trust. Data examples include customer profiles and product information.

A data lake is different because it can store both structured and unstructured data without any further processing. The structure of the data or schema is not defined when data is captured; this means that you can store all of your data without careful design, which is particularly useful when the future use of the data is unknown. Data examples include social media content, IoT device data, and nonrelational data from mobile apps.

3. Data processing

When data is in place, it has to be converted and organized to obtain accurate results from analytical queries. Different data processing options exist to do this. The choice of approach depends on the computational and analytical resources available for data processing.

Centralized processing

All processing happens on a dedicated central server that hosts all the data.

Distributed processing

Data is distributed and stored on different servers.

Batch processing

Pieces of data accumulate over time and are processed in batches.

Real-time processing

Data is processed continually, with

computational tasks finishing in seconds.

4. **Data cleansing**

   Data cleansing involves scrubbing for any errors such as duplications, inconsistencies, redundancies, or wrong formats. It's also used to filter out any unwanted data for analytics.

5. **Data analysis**

   This is the step in which raw data is converted to actionable insights. The following are four types of data analytics:

   1. **Descriptive analytics**

      Data scientists analyze data to understand what happened or what is happening in the data environment. It is characterized by data visualization such as pie charts, bar charts, line graphs, tables, or generated narratives.

   2. **Diagnostic analytics**

      Diagnostic analytics is a deep-dive or detailed data analytics process to understand why something happened. It is characterized by techniques such as drill-down, data discovery, data mining, and correlations. In each of these techniques, multiple data operations and transformations are used for analyzing raw data.

   3. **Predictive analytics**

      Predictive analytics uses historical data to make accurate forecasts about future trends. It is characterized by techniques such as machine learning, forecasting, pattern matching, and predictive modeling. In each of these techniques, computers are trained to reverse engineer causality connections in the data.

4. Prescriptive analytics

Prescriptive analytics takes predictive data to the next level. It not only predicts what is likely to happen but also suggests an optimum response to that outcome. It can analyze the potential implications of different choices and recommend the best course of action. It is characterized by graph analysis, simulation, complex event processing, neural networks, and recommendation engines.

21.7 Different data analytics techniques

Many computing techniques are used in data analytics. The following are some of the most common ones:

Natural language processing

Natural language processing is the technology used to make computers understand and respond to spoken and written human language. Data analysts use this technique to process data like dictated notes, voice commands, and chat messages.

Text mining

Data analysts use text mining to identify trends in text data such as emails, tweets, research, and blog posts. It can be used for sorting news content, customer feedback, and client emails.

Sensor data analysis

Sensor data analysis is the examination of the data generated by different sensors. It is used for predictive machine maintenance, shipment tracking, and other business processes where machines generate data.

Outlier analysis

Outlier analysis or anomaly detection identifies data points and events that deviate from the rest of the data.

21.8 Can data analytics be automated?

Yes, data analysts can automate and optimize processes. Automated data analytics is the practice of using computer systems to perform analytical tasks with little or no human intervention. These mechanisms vary in complexity; they range from simple scripts or lines of code to data analytics tools that perform data modeling, feature discovery, and statistical analysis.

For example, a cybersecurity firm might use automation to gather data from large swathes of web activity, conduct further analysis, and then use data visualization to showcase results and support business decisions.

21.9 Can data analytics be outsourced?

Yes, companies can bring in outside help to analyze data. Outsourcing data analytics allows the management and executive team to focus on other core operations of the business. Dedicated business analytics teams are experts in their field; they know the latest data analytics techniques and are experts in data management. This means that they can perform data analysis more efficiently, identify patterns, and successfully predict future trends. However, knowledge transfer and data confidentiality could present business challenges in outsourcing.

21.10 Data analytics improves customer insight.

Data analytics can be conducted on datasets from various customer data sources such as the following:

- Third-party customer surveys
- Customer purchase logs
- Social media activity
- Computer cookies
- Website or application statistics

Analytics can reveal hidden information such as customer preferences, popular pages on a website, the length of time customers spend browsing, customer

feedback, and interaction with website forms. This enables businesses to respond efficiently to customer needs and increase customer satisfaction.

21.11 Data Analytics in Indian Railways

Indian Railways is the fourth largest railway network in the world, and it is also one of the oldest and largest public sector enterprises in India. With a vast network that spans across the length and breadth of India. As of 2021, the total length of the Indian Railways network is around 68,155 kilometers. It connects over 7,000 stations across the country. Indian Railways operates both passenger and freight trains. As of 2021, there are around 12,000 passenger trains and 8,000 freight trains that operate on the Indian Railways network on a daily basis. The number of trains and their frequency may vary depending on the season and demand.

Indian Railways has always been an essential part of the Indian transportation system. Over the years, Indian Railways has faced several challenges, including declining revenues, increasing costs, and infrastructure issues. However, the organization has managed to turn things around by adopting new technologies, including Big Data Analytics.

Indian Railways generates massive amounts of data every day, from ticket bookings to train schedules to passenger information. The organization realized that by harnessing this data and using Big Data Analytics, it could gain valuable insights that could help it improve its operations and enhance the passenger experience.

Here are some of the ways Indian Railways is using Big Data Analytics:

1. **Predictive maintenance:**
   Indian Railways has implemented a predictive maintenance system that uses Big Data Analytics to monitor the health of its trains and railway tracks. By analyzing data from sensors installed on trains and tracks, the system can predict when maintenance is needed, which helps prevent breakdowns and reduces downtime.
2. **Freight optimization:**
   Indian Railways has also been using Big Data Analytics to optimize its freight operations. By

analyzing data on the availability of trains, routes, and cargo, the organization can optimize its operations and increase efficiency, which has helped reduce costs and increase revenues.

3. **Passenger experience:**
   Indian Railways has been using Big Data Analytics to improve the passenger experience. By analyzing data on passenger preferences, travel patterns, and feedback, the organization can make informed decisions on how to improve its services, including catering, seating arrangements, and cleanliness.
4. **Revenue management:**
   Indian Railways has implemented a revenue management system that uses Big Data Analytics to optimize its pricing strategy. By analyzing data on ticket bookings, passenger demand, and market trends, the organization can adjust its pricing strategy to maximize revenues.

21.12 Benefits of Big Data Analytics in Indian Railways

The adoption of Big Data Analytics has had a significant impact on Indian Railways. Here are some of the benefits:

1. **Improved operational efficiency:**
   By using Big Data Analytics, Indian Railways has been able to optimize its operations, reduce downtime, and increase efficiency, which has helped reduce costs.
2. **Enhanced passenger experience:**
   The organization has been able to improve the passenger experience by using Big Data Analytics to make informed decisions on how to improve its services.
3. **Increased revenues:**
   By using Big Data Analytics to optimize its pricing strategy and freight operations, optimizing routes and minimizing transit times. Analytics is also being used

for determining the optimal speed of trains, which helps reduce energy consumption and saves fuel costs. Indian Railways has been able to increase its revenues.

4. **Predictive maintenance:**
   By implementing a predictive maintenance system, Indian Railways has been able to reduce breakdowns and downtime, which has helped improve operational efficiency and reduce costs. The railways have been able to use data analytics to predict when a particular train or equipment will need maintenance or repairs, allowing them to carry out repairs in advance and avoid breakdowns or service disruptions.

Additionally, Indian Railways has implemented an analytics tool for monitoring punctuality, which tracks the on-time performance of each train and generates alerts for potential delays. This helps the railway officials take necessary action and avoid any further delay in the train schedules. Analytics is also being used for determining the optimal speed of trains, which helps reduce energy consumption and saves fuel costs. Some of the projects of Data analytics in Railways are as under:

1. **Wagon demand forecast in freight business**
   In the freight unloading cycle, a rake switches from the loaded state to an empty state at the end of unloading. Similarly, in loading cycle, a rake switches from the empty state to a loaded state at the end of loading. An empty rake may travel for up to five days to reach the next loading station. Approximately 40% of this turn-round time consists of empty rake movement. Unlike a loaded rake where the destination is known, empty rakes are re-positioned in advance at the likely loading locations.
   As the decisions to assign destination for empties are based on partial information, there are instances where rakes are in surplus at some locations while being inadequate at other locations. Based on a time-series analysis and incorporating additional external data,

wherever available, demand prediction model for demand forecast at cement, coal, iron and steel sidings has been developed for the next 5 days.

Outcome

The model provides information about possible demand at different sidings which facilitates in decision making for re-positioning of empty rakes.

2. **Mid-Section detention of Trains**

The module analyzes the daily mid-section detention of trains based on data published every 30 seconds from locos through RTIS (Real Time Train Information System)/REMMLOT (Remote Monitoring and Management of Locomotives and Trains) devices. AI/ML is used to generate clusters of such locations and further, the clusters are mapped with physical locations like level crossings to analyze probable reason of detentions. This assists in review of locations where interventions are required to reduce the travel time.

Outcome

- Additional support for infrastructure planners –GIS maps

3. **Release Time Prediction**

The module predicts the time between placement and release of rakes at different sidings. With use of machine learning prepare model that can predict the release time of freight trains at the time of its placement.

Outcome

- Bring down idle/wait time of resources involved in rake placement and release.
- Allow railway/division/terminal to plan in advance for post-release activities.
- Increase utilization of siding in terms of rakes handled per day.

4. **Quota optimization and Pricing-**

The demand forecasts can be used to maximize the revenues in a train. This can be achieved in two possible

methods which are common in literature - capacity (booking limit) or price controls. In the capacity control method, the price bands are fixed in the beginning and the capacity is dynamically allocated to each price point based on the demand projections. Indian Railways largely adopts a variant of this policy by allocating the quotas in a static manner. Capacity control or quota optimization distributes the capacity of the train service to the different class and O-D combinations. It ensures that the revenues are protected by reserving seats for long (or short) distance passengers. An equivalent revenue maximization approach would be to change the prices for each o-d pair which is to ensure that capacity is optimally distributed as per the realized demand.

This is based on software applications- PRS, ICMS, UTS and is useful for CCM(PM), CPTM in decision making.

5. **Traffic simulator and Route optimization-**

A loaded freight train is routed by assigning different network elements. During its trip, it interacts with other passenger and freight trains that utilize the network. This interaction causes delays, congestion that affects the overall travel time and utilization of the downstream resources. A traffic simulation on the network will help estimate the expected travel time and congestion on the different segments. Optimal routing policies to maximize the overall throughput of the network can be developed to meet short-term demand bursts.

This is based on software applications- Traffic Simulator, FOIS, COA and is useful for PEDTT(M), CFTM, Sr.DOM in decision making.

6. **Passenger loco link optimization-**

Similar to optimizing rake-links, a derived problem is the one-off optimizing the links for the locomotives that haul the train. Minimizing the number of locomotives

required while respecting constraints such as maximum hauling capacity of the locomotive, maintenance schedules can substantially reduce the fixed costs incurred in the passenger train operations. In the case of diesel locomotives, an additional problem of selecting the right fueling strategy (location, quantity) can also be attempted.

This is based on software applications- SLAM, FOIS, ICMS and is useful for CELE, CMPE, PCOM in decision making.

7. **Terminal Scheduling-**

The expected travel time of loaded and assigned empty rakes will determine the queue of trains destined for a terminal. Each rake can be given an appointment time which will help in resource planning for the terminal operator, traffic controller, consignor/ consignee and other ancillary logistics service providers. Rake release forecasts can be determined for each rake - loaded or empty which will help in further route planning and assignment.

This is based on software applications- FOIS and is useful for Sr. DOM, Chief Controller, Station Master in decision making.

8. **Dynamic Prizing for passenger service-**

Based on real-time demand forecasts, pricing models can be developed to optimize the seat capacity and influence the choice of the passengers to the trains where capacity is available. Dynamic pricing models can be incorporated in the passenger reservation system for improving train occupancy and revenues.

This is based on software applications- PRS and is useful for ED(PM) in decision making.

9. **Network Planning-**

The O-D matrix must be routed through the railway network in an optimal manner. During periods of peak

demand, it is not possible to transport the entire freight traffic through the shortest route. Capacity of the network segments where congestion is expected can be augmented by investing in new routes, additional lines, loop lines, and/or signalling. Profitability and investment analysis can be undertaken at the network level instead of the current practice of determining the rate of return for a segment.

This is based on software applications- Transport Simulator and is useful for ED (Planning) in decision making.

Further real Time health analytics is being used for monitoring all fixed and moving assets. i.e. track, signalling, OHE, rolling stock, loco.

Though data analytics in IR is in formative stages, yet considering huge data captured by various IT modules, enormous opportunities lies in the future for it being used as transformative tools in enhancing efficiencies and increasing revenues.

Indian Railways has been able to turn things around by adopting new technologies like Big Data Analytics. By harnessing the power of data, Indian Railways has been able to improve its operations, enhance the passenger experience, and increase revenues. The organization's success serves as an example of how Big Data Analytics can be used to transform traditional industries and drive its growth and success.

In conclusion, Indian Railways is a great example of how Big Data Analytics can transform businesses and industries. By leveraging the power of data, Indian Railways has been able to improve its efficiency, reduce costs, and provide a better experience for its customers. As more and more companies and industries embrace Big Data Analytics, we can expect to see similar transformations in the years to come.

TRAFFIC SAFETY INSPECTION

22

The meaning of inspection is **"careful examination or scrutiny"** of something, which is being inspected. In other word it is a process of checking something. In the business world, inspection is a critical appraisal of materials, items or system involving examinations, testing, and gauging the product or services. Inspection is formal evaluation of organized examinations exercised upon a process in making of a product or services. Cambridge Dictionary defines inspection as **"act of looking at something careful, an official visit to building or organization to check that everything correct and legal"**. American dictionary defines inspection as **"the act of looking at something carefully in order to discover information"**. An inspection is also a careful examination by an official to ensure that something is in good condition or that rules are being obeyed as prescribed. Further, inspection can be understood as **"act of looking at something carefully to check its quality and condition"**.

Effectiveness of any organization can be judge by some kind of sample test of its product or services. Inspections play an important role in ensuring that everything in the organization is happening as per laid down procedure and it is very important for the organization like Indian Railway as we have to ensure our safety in operation at one hand and quality of services especially passenger comfort at another end. To ensure safe working, inspection of rolling stock, infrastructure and human being is important.

Conduction of inspection is an art as well as science. It is the science because the person who is conducting the inspection must know detail procedure of the working, safety precautions and also various circumstances which lead to loss to the Railway property, accident to human being and if it is on a greater scale than it may lead to a disaster. It is an art to conduct an inspection in a way that the person to whom inspection is being carried on should not feel awkward and there should not be fear among employee rather they should actively co-operate the process. It is not mere the exercise to know the shortcomings, but its purpose should be improvement in system. Inspection must be treated as a positive activity and viewed as sacred to keep system running efficiently and safely.

22.1 The Purpose of Inspection

Purpose of any kind of inspection is to know, whether its system functioning efficiently, safely and desired level of involvement of the staff exists, who runs the system. It is also dependent on the level of officials who is conducting the inspections. If senior management official conducts the inspection than his focus is towards improvement in the system, shortcomings in the system and any major lapses, while if it is conducted by lower functionary, it will be more on procedure oriented and touch upon day to day working. At supervisor level, it will be more exhaustive and cover

every aspect of detail functioning of the system and knowledge testing of staff. The major purpose of inspections is as follow:-

1. It is to be ensured that system is functioning as per laid down rules, procedures and extent policies.
2. During any abnormality, whether staff is taking due care in following correct laid down procedures or otherwise.
3. To know whether staff is adopting shortcuts and lethargic attitude to work and not follow as laid down procedures leading to unsafe working.
4. During inspection it is ensured that staff is in possession of relevant instructions, code and manual with them and also correcting with latest updating with correction slips. It is also necessary that staff understand the relevant rules from the right perspective.
5. Inspection also ensures that staff is alert and a little fearful of being inspected to follow right procedure. If it is found that there are some shortcuts on the part of staff, then inspecting official must counsel the staff and if it is a repeated offence then staff be reprimanded also.
6. The whole objective of inspection is to ensure that staff grievances must be listened to and be rectified.
7. It is a good practice that inspection must be followed with an on-the-spot cash award, commendation certificate, appreciation etc. for good work and if any mistake is noticed then staff be suitably counseled. Punishment during inspection is not the right way of team building rather it will go against overall interest of organization unless some deliberate attempt for loss to the railway property or there is likely hood of any major incident.

22.2 Objects of Inspections

The Railway network is spread over a vast area. It is estimated that for running a train over a section, cooperation and co-ordination of about (2000) thousand Railway staff is essential. A vast organisation, such as the Indian Railway system functions on the basis of a carefully arranged system of selective Autonomy, Accountability and Responsibility. Rules and instructions lay down the procedure of work and the staff are properly trained and the officials at various levels monitor, supervise and direct the staff from time to time by different means. Inspection is an important function of management, particularly in the field of Railway Operations to ensure efficient working at all levels.

Following objects shall be borne in mind while conducting inspection:

1. Verify whether every Railway employee is fully conversant with rules, instructions and procedures relating to his duties.
2. Ascertain that the staff is performing their duties according to rules, instructions and the procedure in force.
3. Detect undesirable shortcuts, irregularities or unsafe practices being resorted to by the staff taking remedial action which may be: -
   - **a)** Educative, in case these are resorted to out of ignorance.
   - **b)** Corrective, if there is something wrong in the working conditions, or there are system deficiencies.
   - **c)** Punitive, if resorted to willfully or negligently and persisting even after repeated guidance and counselling.
4. Observe the conditions actually prevailing at the work spots to understand the difficulties experienced by staff including their personal grievances and seeking on the

spot redressal.

5. Ensure that full complement of staff and equipment is available, and staff have knowledge of its operation.
6. Ascertain that registers, documents and other records are being maintained and preserved according to instructions.
7. Monitor the behaviour of staff towards customers, particularly promptness of response and willingness to help.
8. Assess as far as possible that the interest of the public and the Railways are kept in view and safeguarded.
9. Inculcate discipline and build up the morale of the workers.
10. Check the compliance of previous inspection reports.
11. Analyse efficiency targets vis-à-vis performance.

Inspections, thus provide the means to achieve efficiency and effectiveness through spot checks and personal contact with the staff on line. In order to accomplish these objectives, inspections have to be carried out at officer's and Supervisor's level. The inspecting official has to command the respect and obedience of staff, for his inspection to be effective and beneficial and as such his conduct should be exemplary.

22.3 General Guidelines for Inspecting Official

1. Before commencing the inspection all inspection books should be called for and the notes made by other inspecting official should be carefully pursued to check whether the staff have complied with their instructions.
2. If any of these instructions have not been carried out written explanation of the Station Master should be obtained.
3. It shall not be enough merely to point out the irregularity of the staff; matters must be put right personally while at the station to the extent possible.
4. All books and registers inspected must be initialled and dated.

22.4 Technique of Inspections

It requires both expertise and experience to carry out intelligent inspections. To evolve a sound technique of inspections an inspecting official should:

1. Have a clear understanding of the station lay out its signalling, special features of working and the instructions in regard to reception, despatch, crossing, shunting and running through of trains. For this he should have a good knowledge of not only General & Subsidiary Rules but also of Station Working Rules.
2. Select the feature of working which he intends to check during his inspection and should have a clear conception about them in his mind. For instance, he may like to emphasise on the correct reception and despatch of trains and observance of safety rules by the staff or on utilisation of stock, detention to passenger or goods train, knowledge of staff etc.
3. Inspect the aspect of working by thorough inspection of books, registers, forms and equipment's used for operations and secondly by means of personal observation of actual operations.
   Be selective in choosing:
   - **(a)** The time and operations of personal observation.
   - **(b)** The documents, registers and forms for checks and cross checks.
   - **(c)** The equipment's for checking, its availability, adequacy, maintenance, and its use.
4. Select specific periods for checking registers books and forms keeping in view the purpose of inspection and time of inspections and time of disposal, should be subjected to concentrated, minute and probing checks and cross checks. It may be worthwhile to select two or more separate periods. One of these being that immediately preceding the day of

inspection. This will help him in not only detecting the irregularities being committed but also whether these have been continuing for the past some time.

5. Discuss the irregularities or lapses noticed during inspection with the staff doing the work as well as those supervising their work. Such a discussion will prove to be educative and produce useful results.

Discuss, as far as possible, the points common to two or more branches, like the Signalling Interlocking branch or Loco Train Examining, Civil Engineering and Commercial Branches jointly for objectivity and acceptable solutions. This will help in not only arriving at correct conclusions and forming sound views but also in avoiding unnecessary correspondence.

22.5 Important points to be kept in mind during inspection

It is the responsibility of the inspecting official to record irregularities in concerned register, copy and prints the same. The inspection report must be sent to concerned officials for taking up suitable necessary action. The inspection report must be prepared meticulously following all due points and abnormalities be recorded along with corrective step be followed. Following must be included in instruction report.

1. Date, month, year and time of inspection. It is a good habit that the inspecting officials must devote sufficient time at the place where he is inspecting and should also mention the duration of time spent on that place.
2. Name of the station, section to which it falls and name of the division.
3. Name of the staff contacted and their state of alertness.
4. Biodata of the staff contacted or working at station to ensure that none of the staff is overdue with refresher course training and having PME.
5. If ASM is inspected, He must have Block competency with proper uniform, name badge. Similarly, all other staff may be asked to

produce competency certificate and must be seen their signature in assurance register, which signify that they are knowing Station Working Rules (SWR)

6. The inspecting official must bring out irregularities noticed during inspection and must highlight in the inspection note. The staff should be asked to correct the mistakes or irregularities without any delay.
7. It is always better that inspection reports must have proper sequencing of the items covered in inspection note and mark to concerned officials, who is supposed to take action on these items.
8. It is important that the inspections report must be sent to the place where the inspection has been done for its compliance and copies must be sent to senior officer and other officer to whom intervention is required.
9. During inspection, if some serious irregularities are noticed which may breach to the public safety or any serious financial irregularity, same must be brought to the notice of concerned senior official immediately through phone and other fastest media.
10. It must be a practice by all inspecting officials that they must maintain a file or register, where they must keep one copy of all inspection notes, acknowledgement letter and action taken report for future action if any warranted.
11. The inspections are not fruitful till we must take prompt and careful follow up of those actions. It is seen that most of the time, inspecting officials conduct inspections, send reports and forget. It is not a healthy attitude. Inspecting official must not satisfy till action taken, irregularity rectified, and he is informed.
12. Inspecting officials must be careful that if any incidence happens after their inspection and they have not brought the same or brought out in the inspection note but not corrected than they may be liable for questioning.
13. It is also the responsibility of senior officials to whom the inspecting report has been sent must read it carefully and take action promptly.

14. The compliance report on the inspection is a must and till compliance is not received, we must assume that inspection is still not completed.
15. Inspecting officials must record the good work done by the staff, if any appreciation is required of such staff, the same must be mentioned in inspection report. The inspection report can also mention a suitable cash award, it will boost the morale of staff and other staff will work hard to get such recognition for them.
16. If any assistance is needed by the staff or any staff grievances or public grievances that must be part of the inspection report and same to be marked to concerned official for taking remedial action.
17. It is a kind of good old practice to see the complaint book and find out whether complaints recorded by general public are readdressed or otherwise. A mention of the same is must in inspection report. Similarly, staff grievance register must also be seen by inspecting official and recorded in the inspection report.
18. The duty roaster of staff must be seen, and comments be passed in inspection report that the staff is performing duty as per roaster.

22.6 Types of Inspections

The following inspections have to be carried out by operating and safety officials: -

Regular Inspection (six monthly)

1. Surprise Inspection (Monthly)
2. Night Inspection (fortnightly)
3. Level Crossing Inspections
4. Surprise Inspection by Road
5. Footplate Inspections
6. Joint Footplate Inspections
7. Surprise Speed checks
8. Running Rooms Inspections
9. Ambush checks
10. Running Trains Inspections
11. Loco shed inspections

12. C & W Depots inspections
13. Accident Relief / Medical Equipment Scale I (ARME)
14. Accident Relief Train (ART)

1. Regular Inspection (six monthly) -

Each station on the division must be inspected in detail at least once in every six months i.e. January to June and July to December covering the various aspects of safety, operations and allied matters including staff matters. The inspection shall be carried out by the Sr. DOM/DOM/Sr. DSO/DSO/ AOM / ARM/ SS/ SM/ DTI/ TI etc. While minor stations are inspected by the TI concerned, the DRM will nominate important stations (including all such stations which do not fall within the jurisdiction of TI, that is those which have SS/SM in grade equivalent to or higher than those of TI of the section) to be inspected by the nominate officers. Each officer will be allotted at least two such a station. The officials concern shall also spend the night at the station. Regular inspections have to be comprehensive in nature.

Safety Inspections (monthly) –Safety inspections are basically meant to be preventive by detecting short cut methods and unsafe practices resorted to by train passing, running and maintenance staff. The irregularities noticed must be personally brought to the notice of the Station Master and remedial measures initiated promptly. In case of any serious irregularity, the inspecting officials must at once inform Sr. DSO/DSO or Sr. DOM/DOM concerned personally or telephonically beside making a written report.

2. Surprise Inspection (Monthly)

Such inspections must have an element of surprise. Officers and Inspectors may inspect a station either while passing through it or during the short time at their disposal or when they want to check some aspect at the station without prior notice. Apart from any special aspect, they intend to check; they must also observe and take note of the irregularities/ deficiencies or good work being done which may come to their notice. They may check as many items as possible as time permits. Minimum 6 such inspections in a month shall be conducted by the sectional TI.

In the automatic signalling territory, besides surprise inspections, ambush checks should also be conducted to check whether the Loco pilots / Motormen are observing the rules regarding passing of automatic signal at 'ON' position etc.

Similarly loco pilots' whistling at whistle boards on approach of LC gates also needs to be checked

3. **Night Inspection (fortnightly) –**

Night inspection must be carried out by the Officers and Supervisors frequently to appreciate the working conditions as well as to detect the irregularities.

Surprise night inspection may be carried out between 00 hrs. to 4 hrs. because during this period, the staff is likely to be lethargic and negligent in duties. Similarly, instances of staff sleeping on duty, dim signal lamps and indicators, unauthorised absence from duty and many other irregularities, unsafe and undesirable practices may come to notice between 00 hrs. to 4 hrs. Frequent night inspections are a must and SS/SM must conduct surprise night inspections fortnightly of their station between 00 to 4 hrs. and take remedial measures to rectify the irregularities and deficiencies noticed.

4. **Level Crossing Inspections –**

Level crossing gates should be inspected in detail with a view to ensure safety of rail and road traffic, availability of safety equipments, knowledge of Gatemen regarding rules pertaining to his duties and loco pilot's whistling while passing the LC gates.

5. **Surprise Inspection by Road –**

These inspections have an element of surprise in them. To create a sense of alertness amongst the staff the road inspection should be carried out without informing anybody.

6. **Footplate Inspections –**

Footplate Inspections are carried out by travelling on the engine of running trains. These afford an opportunity to the inspecting official to observe and check certain aspect of working on the engine, along the track and at the stations which cannot be checked otherwise. To achieve the purpose for which footplate inspections are carried out, it is essential that these are done by day and by

night, in clear weather and when the visibility is poor due to thick, foggy or tempestuous weather.

7. **Joint Footplate Inspections –**
   These are carried out jointly with officials of Mechanical, Electrical (Running), Permanent Way and Signalling branches e.g. checking the visibility of the signals, their locations, operations, lighting up, speed restrictions and caution boards rail wheel interaction and loco pilots' and assistant loco pilots' operating behaviour.
8. **Surprise Speed checks –**
   In order to ensure the maximum permissible speed are not exceeded, permanent and temporary speed restrictions are correctly observed and limits of speed over turnouts and facing points are observed, surprise speed checks should be conducted as per schedule.
9. **Running Rooms Inspections –**
   During regular, safety, surprise and night inspections opportunity should also be taken to inspect running rooms to ensure that running staff are able to get proper food and resting facilities. Running rooms should also be jointly inspected by the team of officers as nominated and prescribed.
10. **Ambush checks –**
    It is essential to ensure rigid observation of rules when automatic stop signals are passed in 'ON' position. The inspecting officials should carry out ambush checks with the help of signalling officials who will arrange to put an automatic stop signal to 'ON' position. Such checks should be arranged in consultation with Sr. DOM/DOM.
11. **Running Trains Inspections –**
    Whenever an operating officer or an inspector is travelling by a train on duty, he must pay special attention in observing the performance of duties by Guards, Loco pilots, Station staff, Gatemen and others.
12. **Loco shed inspections –**
    One loco shed shall be inspected once in 3 months individually as well as jointly.

13. C & W Depots inspections –
Each C & W depot shall be inspected once in 3 months individually as well as jointly.

14. Accident Relief / Medical Equipment Scale I (ARME) –
Each Medical Van shall be inspected once in 3 months (see Accident Manual).

15. Accident Relief Train (ART) –
Each Break down train shall be inspected once in 3 months (see Accident Manual).

22.7 Inspection Quotas

The minimum number of regular, surprise, safety and night inspections will be carried out by officers and inspectors as per quota fixed from time to time. The tentative schedule of inspection is attached.

Schedule of Inspections by Operating/Safety Officers and Transportation Inspectors

S. No.	Type/ Nature of inspections	Sr. DOM /DOM	Area Manager/ Area Officer	AOM(M)	Sr. DSO /DSO	AOM(G)	TIs
1	Regular Inspection - Half yearly	2 important stations as nominated by the DRM	2 important stations as nominated by the DRM	2 important stations as nominated by the DRM	2 important stations as nominated by the DRM	2 important stations as nominated by the DRM	All stations in their jurisdiction once in three months.
2	Safety Inspections	--	--	1 station every month	4 stations every month	6 stations every month	All stations in their jurisdiction once in a month

3	Surprise Inspections	No quota	No quota	Minimum 2 stations per month	As often as possible (minimum 2 every month)	As often as possible (minimum 3 every month)	As often as possible (minimum 6 every month)
4	Night Inspections -i. Level crossing ii. Station iii. Footplate on goods train	1 per month 1 per month 1 per month	1 per month 1 per month 1 per month	1 per month 1 per month 1 per month	2 per month 2 per month 2 per month	2 per month 2 per month 2 per month	3 per month 3 per month 3 per month
5	Level Crossings during daytime	1 per month	1 per month	1 per month	2 per month	2 per month	3 per month
6	Surprise road Inspections	1 per month	1 per month	---	1 per month	1 per month	1 per month
7	Individual footplate inspections	1 section per month by both i. Mail/ Express/Pass. ii. Goods train	1 section per month by both i.Mail/ Express / Pass. ii. Goods train	1 section per month by both i. Mail/Express / Pass. Goods train	1 section per month by both i. Mail/Express/ Pass 2 Goods train	1 section per month by both i. Mail/ Express/Pass 2 Goods train	1 section per month by both i. Mail/ Express/ Pass ii. 3 Goods train
8	Joint Footplate Inspections	---	---	---	One section every quarter covering the entire division once	One section once a month covering	One section once a month covering

					a year.- Up and Dn separately by day and night.	the entire division once a year.- Up and Dn separately by day and night.	entire jurisdiction once in six months including Up/ Dn day/night separately.
9.	Surprise speed checks	No quota	No quota	No quota	3 per month	3 per month	5 per month
10	Running Rooms Regular Inspections	1 major running room as identified by DRM- once a year (alongwith Sr.DEN and Sr.DEE	1 major running room as identified by DRM- once a year (along-with Sr.DEN and Sr.DEE	All running rooms under Sr./DSOs charge of Mechanical & Electrical dept. (alongwith AEN AEE & AME	All running rooms under Sr./ DSOs charge of Mechanical & Electrical dept. (alongwith Sr.DEN & Sr.DEE	All running rooms under Sr./ DSOs charge once a year (alongwith with AEN and AEE	Each running room under their jurisdiction once in a month.
11	Ambush Checks in Automatic signalling territories	--	One during day and one during night	One in a month	One during day and one during night in a month.	One during day and one during night in a month.	One during day and one during night in a month.
12	Running Trains Inspections	As often as possible	As often as possible	As often as possible	As often as possible	As often as possible	As often as possible
13	Loco	--	--	--	1 shed every	1 shed	--

	Shed Inspections				3 months	every 3 months	
14	Depots Inspections	--	--	--	1 Depots every 3 months	1 Depots every 2 months	--
15	Accident Relief Medical Equip-ment Scale –I (ARMEs)	--	--	--	1 Medical van every quarter.	1 Medical van every quarter.	--
16	Accident Relief Trains-(ARTs)	--	--	--	1 ART every quarter	1 ART every quarter	--

Note: For S.No.10, 11 and 13 – all loco sheds, C&W Depots and Medical Vans are to be covered in a year either by DSO or AOM(G). The quotas had shown indicates the minimum inspections. Inspections in respect of above items and other items should be carried out as frequently as possible.

PART II:
SAFETY

SAFTEY DEPARTMENT: ORGANIZATION SETUP, FUNCTIONS AND ROLE

23

The beginning of separate safety organization in Indian Railway started when Central Government had constituted a committee in 1962 to study in detail about safety in Railway under Justice Kunzru. The Kunzru Committee had recommended to the Central Government that there should be a separate department for safety. In 1968, Wanchoo Committee and later Sikri Committee in 1976 had also recommended that there must be a separate department for the safety, and it must oversee the safety in railway operation and other aspects.

Safety organization in Indian Railway acts as watchdog and keep monitoring compliance of rules, code, manuals, and other safety instructions issued by Railway Board and Zonal Railways. Safety organization is functioning at three levels as Railway Board, Zonal Headquarter and at Divisional Level. The Safety Department has been empowered to launch various safety drives, circulars, instructions and flag the issues which may cause accidents or any other incidents.

Earlier, Safety department was being manage by traffic transportation department (Operating Department) but after the judicial enquiry, Ministry of Railway had decided that safety department would be broad based and to be managed by five major departments jointly (Operating, Civil Engineering, Mechanical Engineering, Electrical Engineering and Signal Engineering) at all levels.

The safety department at Railway Board Level had been given authority to undertake studies about various safety issues in Railways. They had been mandated that all short term, medium term, and long-term steps be taken for improving the safety on Indian Railway. Research, Design and Standard Organizations (RDSO) is also associated with Railway Board in various studies and research about safe working in Railways.

23.1 Safety Organization at Railway Board:

With the organization of Railway Board, Safety organization is headed by Director General at apexes level with Principle Executive Directors and Executive Directors from all department, namely as Traffic, Civil, Mechanical and Signal & Telecommunication Engineering Departments. The functions of safety organization at Railway Board Level are as below.

1. Safety Organization at Railway Board is assigned for technological improvements in Railway function to minimize human elements in train accidents like, development in signaling, axle counters, track circuiting, Automatic Train Control System, Train Warning System etc.
2. Coordination in setting up various safety committees to conduct detailed studies of Railway accidents and taking appropriate actions.
3. To provide technical and managerial assistant to

high powered committee set up by government of India on Safety and Accident-related issues.

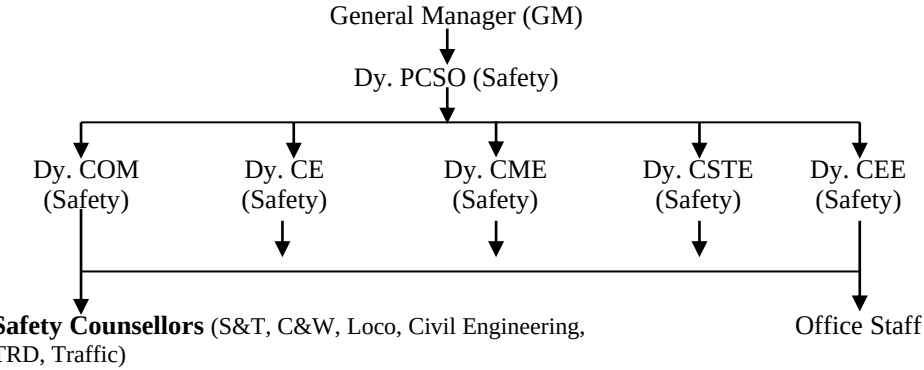
4. Keeping data and other statistics of accidents happening in Railways and analyzing the trend and major causes of accidents. Safety organizations are also responsible for taking up remedial measures to prevent accidents and guiding Zonal Railways through safety circulars, recommending correction in General rules, accident manuals and all other manuals etc.
5. Safety organizations at Railway Board Level are also responsible for education and awareness among general people about safety specially to prevent Level Crossing Accidents, Fire Incidents etc.
6. The safety organization is responsible for analyzing and recommendations of the report of all accident enquiry reports conducted by Judicial Authorities or Chief Commissioner or Commissioners of Railway Safety or and other Central Agency appointed by Government of India. The accepted recommendation by Central Government is executed through safety organization to all Zonal and Divisional Administrations.

Launching safety drives on important safety related issues and conducting inter-zonal and divisional safety **audits.**

23.2 Safety Organization at Zonal Headquarter Level:

At Zonal Headquarter Level, safety organization is headed by Principal Chief Safety Officer (PCSO), since safety department has been broad based, senior officer, generally officer who had worked as Divisional Railway Manager are posted as PCSO.

Regarding all safety matters, he is the Head of the department of safety and helps the General Manager on all safety matters. He is assisted by officers at the level of assistant grade to Senior Grade, Inspectors, and safety counselors from all departments. A typical organizational structure of safety organization at headquarters level is as under:



The safety organization at Zonal Headquarter Level has assigned with following functions: -

1. The first and foremost duty of safety organizations is to take actions to prevent accidents and unusual incidents, which may lead to accidents.
2. Safety Organization at Headquarter Level needs to analyze the data of accidents in Zonal territory and take remedial action.
3. Various safety drives and safety circulars were issued to sensitize the field level staff and aware them about safe train working. The Safety Organization has also organized safety seminars and debates.
4. It is the responsibility of the safety organization to ensure that all accident enquiries are

completed within the time frame as prescribed by the Railway Board.

5. All accident reports are being submitted to safety organizations and those need to be carefully studied. The observation and recommendation of the accident enquiry committee are to be put up with the General Manager with an action plan.
6. Disciplinary action to be taken against the defaulting staff by controlling officers. The role of safety organization is to see that punishment is being taken as per norms issued by Railway Board or otherwise. If punishment is not being awarded as per Railway Board norms, then safety organization will initiate the review of such cases.
7. Safety Organization needs to monitor the progress of various safety related works in the Zonal Railway and keep close watch. Time to Time, progress of such work to be put up to General Manager.
8. Surprise checks are to be conducted at field level to ensure that no shortcuts or unsafe practices are being resorted to by field staff. All safety equipment, forms and register are available with field staff.
9. Inter Divisional Safety Audits are to be conducted and deficiencies, shortcuts, unsafe practices are to be highlighted at an appropriate level. Various ambush checks are conducted to ensure that safe operation is being carried out at field staff level.

10. The periodical inspections of accident relief trains and medical vans need to be conducted and time to time mock drills must be organized to gauge the preparedness of staff and officers to deal with accidents.
11. Most of the safety category staff must undergo periodical medical tests and refresher training, safety organization must keep a watch that no staff is to work with overdue medical test and refresher training. Time to Time safety camps is also being organized by safety organizations.
12. To prevent level crossing accidents and fire cases, safety organizations need to launch various public awareness programmes like publication of advertisement in local newspapers, distribution of pamphlets, organizing drama in villages.

23.3 Safety Organization at Divisional Level:

The Safety Organization at Divisional level is headed by Senior Divisional Safety Officer (Sr. DSO). He is assisted by officers like Divisional Safety Officer (DSO), Assistant Divisional Safety Officer (ADSO) of various train running departments as under:

DRM

↓

Sr. DSO

↓

ADSOs

(Traffic, Civil Engineering, Mechanical, S&T, Electrical)

↓

Safety Counsellors

(S&T, C&W, Loco, Civil Engineering, TRD, Traffic)

The Sr. DSO is directly reporting to Divisional Railway Manager (DRM). Due to broad basing safety organizations, now the officers at Divisional Railway are being taken from Traffic, Civil, S&T, Mechanical and Electrical Department. Safety Organization is being treated as ex-cadre posting.

The Safety Organization at Divisional level is watchdog to the organization for safe running of trains and Sr. DSO is eye and ear to DRM. It must monitor and coordinate safety related work. The major functions of safety organization are as under:

1. The basic function of safety organization at divisional level is to prevent accidents, minimize human loss, adherence of safety rules by staff and minimal loss to the Railway property due to accident and unusual occurrences.
2. Organizing safety inspections and suggesting remedial actions on deficiencies noticed during inspections. Conducting safety audits at various stations and important junctions of the division.
3. Various safety related works at division are to be monitored by Safety Organization.
4. Reviewing the station working rules at the Railway Stations and promptly issuing the correction slips as a when required.
5. Launching divisional safety drives, issuing safety circulars and other safety material. The outcome of safety drives and deficiencies noticed during safety inspections are to be put up to concerned officers and Divisional Railway Managers.
6. The Safety Department needs to periodically review the station working rules and inspect that work is being done as per station working rules of the stations.
7. Safety Audit of Stations, yard, lobby to be done to ensure that work is being done as per safety rules.
8. Safety departments need to monitor that officers are carrying out safety inspections of stations, yards, different works

centers like coaching, freight examination depots, loco shades, etc. Beside this inspection, safety departments may ask their inspectors and counselors to do cross check and convey the same to concerned authorities.

9. At divisional level, the safety department has been given responsibility for counseling the field staff. Safety organizations at divisional level have inspectors designated as safety counselors from all technical and traffic departments.
10. The inspection of Accident Relief Train (ART) and Accident Relief Medical Equipment (ARME) or Medical Van must be done periodically. To sensitize staff and officers, occasionally accident mock drills must be organized surprisingly. The attention and preparedness of the staff and officers to be checked and if any slackness noticed same to be rectified.
11. The Safety department organizes a joint disaster management mock drill ,conducted every year in coordination with the NDRF unit located in the jurisdiction of the division.
12. One of the foremost responsibilities of the safety department is to organize accident enquiry as per laid down norms in accident manuals. The accident inquiries be completed within the time frame as laid down in accident manual of Zonal Railway.
13. The recommendations and findings regarding accident inquiries must be followed and staff responsibility must be taken up under Disciplinary Action Rule (DAR) by concerned Disciplinary Authority (DA) concerned as per norms laid down by Railway Boards. If punishment is not granted as per Railway Board circular, then Divisional

Railway Manager may be requested for Railway Board Manager.

14. To create awareness among the public about Safety at Level Crossing, extensive use of electronic, television, social media and print media be made. The Safety Organization may also get prepared short films on safety and be shown in local theatres.
15. Safety Organization may also issue safety posters for displaying in station master's cabin and other work area.
16. To promote appreciation of safety, accident-free awards be distributed among safety categories staff.
17. It is important to the safety organization that safety consciousness be spread among running staff. It is important that loco inspectors are counselling them properly; overdue medical loco pilots are not allowed to work, regular periodical medical examination, refreshers courses, breathalyzer test at lobby and more importantly not working beyond 10 hrs. duties at a stretch.
18. Safety officers and inspectors must do foot-plate inspections to know the condition of track, positioning of signals and alertness of assistant loco pilots like calling out of signals and observing speed restrictions correctly.
19. The safety department should organize safety weeks and celebrate then to spread awareness about safe working in the division.
20. The employee who has maintained a good safety record must be encouraged by granting them a safety medal, accident-free award, safety shields, etc.

Since advent of Railways, accident had been one of the causes of concern and it makes Railway Safety as a complex issue. If Railway Operation is made accident free, then it is one of the safest transport modes. The accident in the Railways cause loss of

human lives, property and damage to the rolling stock and other installations. Annually, most of the Railways System suffers huge losses in millions of dollars, revenue loss due to disruption of traffic, dent in public image and losses due to compensation paid to the passengers and freight customers.

In most of the accidents, it is revealed that many accidents happened due to negligence of Railway Officials and root cause of this negligence is lack of proper training and sensitivity towards the accidents. The accidents can be prevented rather completely eradicated if all employees of Railways are given rigorous training in the beginning, periodically refreshers courses, tough medical examinations, and a good service environment. The knowledge of ever-changing technology in Railways must be taught to Railways employees to make them aware of the working.

We all know that Railways are huge capital-intensive industry but due to high investment in Railways, human element become secondary, and Railway could not focus on investing with human resource as spending towards their training, good living environment, better service condition and other issues. The working environment in the Railways, especially work culture, noise level, temperature at work site, ergonomics, discipline, training, and counseling greatly impact the performance of employee. Railways must acquire new technology for the safe running of the train but not ignore the investment in human resources, specially making them informed about new technology.

To understand safety, we must be aware about the background of safety in industrial and railway working. With the advent of industrial revolution in Great Britain, the thought of safety in working environment and personal safety of the workers had taken prime importance way back in the beginning of 19th Century, a safety saying was in wide circulation in those days, which read as

"Do not think because an accident has not happened to you that it can't happen" further another saying of same era read as **"Carefulness costs you nothing. Carelessness may cost you your life".**

To understand safety, it is a necessity to understand safety as in holistic manner rather an activity to prevent accident. If we go by different dimension of safety, it is certainly a concept for deep thinking to prevent injury, loss of lives, damage to the property and loss of public image of any business or production organization. If we relate safety as a method or technique to reduce hazards, then we must work for it and government must also legislate the same. In a nutshell, safety can be understood as-

> "Safety is an organized activity based on knowledge and experience, which controls hazards in workplace into a risk-free working environment, in which workers can work without a chance of human injury, damage to properties, pollution of workplace environment and/or a combination of those. Safety fulfils professional, social & moral needs and helps to increase plant productivity."

It is a fact that there has been tremendous growth in awareness for safety in industries and more specifically in Railways but still need to work hard to ensure safety through various management techniques, control methods and methodologies. Off late, experience reveals that despite so much work, still we could not achieve a satisfactory level in accident prevention, and it is a fact that accidents are re-occurrences of and repetition of previous accident; it is a serious worry to the management.

Most of the companies formulate policies and action plans for safe working but often fail in implementing the same. Unless management work hard to know about the failure of their action plane about the safety, nothing will change. Most of the experts believe that nine out of ten disasters can be predicted well before

they happen, but we need to take timely action, therefore, to prevent any accident a well laid out strategy be formed and implemented in to-to.

In India, to promote safety awareness in industry and other activities, a national level body formed in the name of "National Safety Council of India", who is supposed to monitor and spread the safety awareness in industry.

23.4 Philosophy of Safety

Aeschylus said that **"Obedience is the mother of success and is wedded to safety."** It was further added by the quote that **"For safety is not a gadget but a state of mind."** by Eleanor Everest. Working safety is not expensive but it is priceless, and the only action required for safe working is to **"Prepare and prevent, don't repair and repent."** Jerry Smith quote that **"Safety doesn't happen by accident."** The management and leadership take the lead to ensure safe working practices, especially the railway operation.

The famous quote on safety **"Luck runs out, but safety is good for life."** is always true that safety can certainly be achieved by meticulous planning, hard work, better training and counseling by supervisors and officers.

Before we go into the philosophy of safety, we must understand the literal meaning of safety as such. Safety is defined as under:

1. **"The condition of being protected from or unlikely to cause danger, risk, or injury-** Oxford Dictionary".
2. **"The condition of being safe from undergoing or causing hurt, injury, or loss"** - Merriam & Webster
3. **"Safety is the state of being safe from harm or danger"**-Collins's dictionary.

With above meaning of safety, it is attributed that "**the safety is the state, where we are safe from any danger, risk, injury and monitory losses."**

The employees are the most valuable resources of any business organization, keeping them safe is the responsibility of the organization and its management. Any business or production line can't be more important than the personal safety of its workers. It is a fact that all accidents can be prevented. The safety is an integral part of everyone's job. The customers, employees, supervisors, and managers are responsible for ensuring safety on the floor as well as whereas production and services are produced. It is the right of every employee and laborer to ask for a safe environment for their work and the same is legislated with several State and Central Governance Acts.

The core safety beliefs of any organization are centered on a safer work environment for the workers as well as ensuring safety for its customers. It is the basic value, which is to be integrated with the products and services to be provided by any business or social or any government organization. The core safety values are as under:

1. All accidents are preventable.
2. All injuries and deaths are preventable. Incidents can be managed.
3. Working safely is a condition of employment, and the employee has the right to ask for it. No job is worth getting hurt for.
4. All operating and managerial exposures can be safeguarded. Safety is everyone's responsibility.
5. Learning, training, and counseling of the employees to work safely is essential and Continuous process.
6. Injury/Illness prevention has a direct impact on employee morale, productivity, company

earnings and customer satisfaction.

7. Recognizing safe behavior fosters better understanding of our policies, philosophy, and practices.
8. Safety as a "way of life" for 24 hours/day.
9. All individuals have the responsibility and accountability to identify, eliminate or manage risks associated with their workplace.

The above core safety values are universal and lay the foundation of philosophy of safety. If we go into deep of human psyche, it is revealed that the fulfillment of safety comes through mindfulness. If a person devotes his all actions to the present moment and is aware of the self, then safety can be ensured. It is often seen that the person who falls victim to an accident or incident is either in the past moment or thinking ahead of the time. Safety is not the activity, but an attitude of the person, who think that whatsoever he or she is performing, same is safe for himself or herself or any other being even to the environment.

INTRODUCTION, CLASSIFICATION AND REPORTING OF RAILWAY ACCIDENTS

24

Indian Railways is one of the largest railway systems in the world and is fully owned and operated by Ministry of Railways, Government of India. It plays a significant role in driving economic growth of the country, offering highly affordable, environment-friendly transportation to passengers and freight, especially bulk commodities, across the country. Indian Railways, like any other transportation system, is technology intensive not only for ensuring high productivity of its assets but also safety in train operations.

Indian Railway (IR) is a vast system comprising of nearly 65,000 route kilometers with over 7,500 block stations and holding nearly 13,000 locomotives, 63,000 passenger coaches, 12000 electrical and diesel multiple units and 3,20,000 thousand wagons. Further the Indian Railway (IR) system has 12.13 lakh strong work force, handles 25 million passengers and 1518 million tonnes of freight, and earns Rs.1,91,000 crores on yearly basis which makes the Indian Railway network one of the busiest railway networks in the world, handling massive numbers of passengers and quantities of

goods daily. (Source: Railway Yearbook 2021-22)

The IR has long served as the backbone of this nation's economy by being the most popular means of long-distance transportation in India. Besides the huge network, heavy traffic, over-saturation of rail tracks, extreme weather conditions and many more challenges; IR is committed to safe journey to avoid loss of life and property through continuous modernization and strengthening the infrastructure, adopting latest technologies, engagement of experienced and trained manpower, periodic maintenance and checkups, safety audits etc.

Indian railway also has its own disaster management plan to manage the railway accidents in all the phases viz. pre, during and after the disaster. But the safety on the railways is the end product of the coordination among all the factors. A single flaw in the complex network of track that crisscross the country, a defect in over several hundred locos, coaches and lakh of wagons that haul about millions of passengers and nearly several million tonnes of freight every day, an incorrect indication on one of the thousands of signals that dot the rail landscape, a mistake or an act of negligence by one of its staff directly associated with train running, even a rash act by one of the millions of road users who daily negotiate around odd level crossing gates spread across the system, an irresponsible act of carrying inflammable goods, any one of these multiple possibilities has the potential to cause a major tragedy. Added to these are the acts of sabotage by misguided elements spanning the whole country.

> The consequential train accidents include mishaps with serious repercussion in terms of loss of human life or injury, damage to railway property or interruption to rail traffic in excess of laid down threshold levels and values which include collisions, derailments, fire in trains, road vehicles colliding with trains at level crossings, and miscellaneous

train mishaps.

The train accidents trends, fatalities, causes and management has been continuously studied worldwide and also in Indian Railways and it is established that "human error induced factors being the major contributor for railway accidents."

Railway is one of the safest and most convenient modes of transportation, but occasional occurrence of Railway accidents causes worry and shake the confidence of the common travelling person. If the Railway accidents are controlled, it may boost the economy of the country and greater satisfaction among public.

The Accidents happens when there is a breach of the Rules or there is laxity in the maintenance of track or rolling stock or the Signals or due to the wrongdoing by the Railway staff or may be due to the outside interference. The accidents and untoward incidences on the Railways system are not only affecting the normal operation but, the loss to the human life and loss to the Railway asset which dents the image of the Railway.

An accident or an incident is not only the cause of concern for the safety of the travelling people, but it also leads to the great loss to the railways by way of condemnation of Railway assets, such as Railway Locomotives, Rolling Stock, track and, bridges. In addition to this a large amount of compensation is also to be paid to the passengers. Therefore, it is the duty of each and every Railway official to work for preventing the Accidents by all means.

24.1 Accident Manual

It is mandated that every Zonal Railway must maintain and implement a set of instructions in detail including actions to be taken after an accident compiled in a book form. This book is called the **Accident Manual**.

The accident manual is the principal document, which is required to be followed by every Railway official in zone. Beside Accident

manual, every zonal Railway must compile a disaster management plan also.

In the year 2000, the Railway Board has issued a circular for Definition and Re-classification of Accidents on Indian Railways vide letter no. 2000/Safety(A&R)/19/20, New Delhi dt. 13.12.2000 addressed to The General Manager (Safety)/OSDs, All Indian Railways Including Metro Railway, Konkan Railway Corporation and Railway Electrification. The letter has been approved by CRB (Railway Board) and signed by Shri Indra Ghosh, Executive Director/Safety, Railway Board. The letter mentioned following:

(a) Follow up action on DAR cases should cover all accidents and not only those which are reportable to the Railway Board/Hqrts as per revised guidelines.
(b) emphasis on relaying the prima-facie cause within 24 hours should be relevant to all type of accidents.
(c) monitoring of adequacy of punishment should be for all type of accidents.
(d) emphasis by the Divisional/Zonal offices in following the laid down schedules of accident inquiry, DAR cases and its finalisation, should be relevant for all types of cases.
(e) Statistical information regarding incidents not relayed to Board should be covered in monthly Safety MCDO's along with action taken.

The Railways were advised to follow above instructions without exception and be incorporated in Accident Manual of respective Railways.

24.2 Board's letter No.88/ Safety(A&R)/29/8 dated 18.4.1988

In supersession of instructions contained in Board's letter No.88/ Safety(A&R)/29/8 dated 18.4.1988 and letters of even number dated 10.8.2000 and 17.10.2000, Railway Board has issued fresh instructions for definition and Re-classification of Accidents on Indian Railways vide Railway Board letter no.

2000/Safety(A&R)/19/20, New Delhi dt. 31.10.2000. Following definitions are given as under:

Definition

24.2.1 Train

A train is a set of vehicles, empty or loaded, worked by locomotive, or any other self-propelled unit including light engine/engines or rail-motor vehicles or a single rail-motor vehicle, empty or conveying passengers, livestock, parcels, or goods, which cannot be readily lifted off the track and running under a particular number or a distinct name from fixed point of departure to a fixed destination. Part of a train shall also be treated as a train for the purpose of these definition, classification, and statistics. The train engine or any other vehicle once put on the train continues to be a part of the train until the station is reached beyond which it is not required to go on the same train. At such stations, the moment the train engine or any other vehicle is cut off the load, it ceases to be a part of the train.

24.2.2 Passenger Train

A train intended solely or partly for the carriage of passengers shall be treated as a passenger train. A workman's train or a ballast train or a material or an Accident Relief train or a Tower Wagon or such other train carrying workmen, or Cattle special/Military special carrying authorized escorts, or similar such train shall be treated as a passenger train.

24.2.3 Other Train

All other trains not covered under 1(ii) shall be termed as 'other trains.'

24.3 Accident

For the purpose of Railway working, accident is an occurrence in the course of working of Railway which does or may affect the safety of the Railway, its engine, rolling stock, permanent way and works, fixed installations, passengers or servant or which affect the safety of others, or which does or may cause delay to train or loss

to the Railway. For statistical purposes accidents have been classified in categories from "A" to "R" excluding "I" and "O".

24.4 Injuries

Injuries are classified as

(a) Grievous
(b) Simple

24.4.1 Grievous injuries

'Grievous' injuries for purpose of these statistics should be taken as injuries as defined in Section 320 of Indian Penal Code reproduced below for ready reference. (Section 320, Indian Penal Code 45 of 1860). Following kinds of hurt only are designated as 'grievous': -

(A) Emasculation.
(B) Permanent privation of the sight of either eye.
(C) Permanent privation of the hearing of either ear.
(D) Privation of any member or joint.
(E) Destruction or permanent impairing of the powers of any member or joint.
(F) Fracture or dislocation of a bone or tooth.
(G) Any hurt which endangers life, or which causes the sufferer to be, during the space of twenty days, or in severe bodily pain or unable to follow his ordinary pursuits.

24.4.2 Simple Injuries –

(i) A person will be considered to have incurred simple injuries if these injuries incapacitate the injured person to follow his customary vocation during 48 hours after the occurrence of the accident.
(ii) A Railway servant is considered to have been injured if he/she is prevented from returning to work as a result of injuries for a period of 48 hours after the occurrence of the accident.

24.5 Threshold Value:

For the purpose of accident, threshold value is the minimum value beyond which the accident will be treated as having serious repercussion on the basis of loss to railway property or interruption to communication. It shall constitute two portions:

Threshold value of Railway property

Threshold value of Railway property, loss which is fixed at One lakh rupee.

or

Threshold value of interruption to communication either partial or total where duration of interruption is equal to, or more than Number of hours specified against each cell.

Interruption	**BG- A, B, C or D Spl. (in hours)**	**BG- D, E, Spl. or MG- Q, R (in hours)**	**BG-E, MG-S or NG route (in hours)**
Total	3	4	6
Or	Or	Or	Or
Total + Partial	6	8	12

Duration of Interruption is defined as duration from the time of accident till starting of first train on-line clear from adjacent station for movement over the affected line in that section.

24.6 The classification of the Railway accidents

Accident is classified under following heads: -

1. Train Accidents.
2. Yard Accidents,
3. Indicative Accidents.
4. Equipment Failures.
5. Unusual Incidents.

Detailed classification is given in 24.7

24.6.1 Train Accidents:

Train accident is an accident that involves a train. Train accidents are further divided as: -

(a) Consequential train accidents; and
(b) Other train accidents

(a) Consequential train accidents

Consequential train accidents include train accidents having serious repercussion in terms of loss of human life, human injury, loss to Railway property or interruption to Rail traffic. Train accident under following classification will be termed as consequential train accidents: -

Collision: All cases under categories A-1 to A-4.
Fire: All cases under categories B-1 to B-4
Level Crossing: All cases under categories C-1 to C-4
Derailment: All cases under categories D-1 to D-4
Miscellaneous: All cases under category E-1

(b) Other train accidents

All other accidents which are not covered under the definition of consequential train accidents are to be treated as "other train accidents". These include accidents under categories B-5, B-6, C-5 to C-8, D-5, and E-2.

24.6.2 Yard Accidents:

All accidents that take place in a yard and does not involve a train are termed as Yard Accidents. These include accidents falling under categories A-5, B-7, C-9 and D-6.

24.6.3 Indicative Accidents:

In real term they are not accidents but are serious potential hazards and include all cases of train passing signal at danger, averted collision, breach of block rule coming under classification F, G and H.

24.6.4 Equipment Failure:

These include all failure of railway equipment i.e. failure of locomotive, rolling stock, permanent way, overhead wire, signalling and telecommunication equipment and include cases falling under classification J, K, L and M.

24.6.5 Unusual Incidents:

These include cases related to law and order but not resulting in train accidents and other incidents under classification N, P, Q and R.

In revised Accident Manual, consequential train accidents are classified as under and graded as per English alphabet with numerals. These accidents have been classified under categories from **'A' to 'M'** except **"I" and 'O",** further these categories of the accidents are sub divided into numerical **'1' to '4'** depending upon severity of the accident. Such categorization of accidents into Alphabet and Numerical is quite helpful in keeping proper record for Statistical Purpose and Analysis.

The current classification of the Railway accidents is tabulated as under:

ACCIDENTS			
S.N.	**Class**	**Type of Accidents**	
1.	**A**	Collision	A 1 to A 5
2.	**B**	Fire	B 1 to B 4.
3.	**C**	Level Crossing	C 1 to C 4
4.	**D**	Derailment	D 1 to D 4
5.	**E**	Other train Accident	E 1
INDICATIVE ACCIDENTS			
S.N.	**Class**	**Type of Indicative Accidents**	
6.	**F**	Averted Collisions	F 1
7.	**G**	Breach of block rules	G 1
8.	**H**	Train passing signal at danger	H 1
EQUIPMENT FAILURES			
S.N.	**Class**	**Type of Equipment Failure**	
9.	**J**	Failure of engine and rolling stock	J 1
10.	**K**	Failure of Permanent Way	K 1
11.	**L**	Failure of Electrical equipment	L 1
12.	**M**	Failure of S & T Equipment	M 1
UNUSUAL INCIDENTS			
S.N.	**Class**	**Type of Unusual Incidents**	
1.	**N**	Train Wrecking or attempted train wrecking or	N 1 to N 3

		Sabotage to a train	
2.	**P**	Casualties	P 1 to P 3
3.	**Q**	Other incidents	Q 1 to Q 6
4.	**R**	Miscellaneous	R 1 to R 5

The above classification is decided for proper logging of accidents in computerized program. The serial number of sub-classes of accident is placed on the basis of severity of accident, if it is sub-class 1 then it is more serious than sub-class 2 or 3 or 4 or 5.

24.7 Accidents

24.7.1 Class 'A' -- Collisions

Sub-Class	Type of Accidents
A1	Collision involving a train carrying passengers, resulting in **i.** loss of human life and/or grievous hurt, and / or **ii.** damage to Railway property with value exceeding Rs. 2 crores, and/or **iii.** Interruption of running on any important through line for at least 24 hours.
A2	Collision involving a train not carrying passengers, resulting in **i.** loss of human life and/or grievous hurt, and/or **ii.** damage to Railway property with value exceeding 2 crores, and/or **iii.** interruption of running on any important through line for at least 24 hours.
A3	Collision involving a train carrying passengers, but not falling under A.1 above.
A4	Collision involving a train not carrying passengers, but not falling under A.2 above.
A5	Other collisions i.e., collisions occurring in shunting, marshalling yards, loco yards, and sidings etc., but not involving a train

24.7.2 Class 'B' -- Fire in trains

Sub-Class	Type of Accidents
B1	Fire in a train carrying passengers, resulting in **i.** loss of human life and/or grievous hurt, and/or

	ii. loss to Railway property with value exceeding2 crore, and/or **iii.** interruption of running on any important through line for at least 24 hours.
B2	Fire in a train not carrying passengers, resulting in **i.** loss of human life and/or grievous hurt, and/or **ii.** damage to Railway property with value exceeding 2 crores, and/or **iii.** interruption of running on any important through line for at least 24 hours.
B3	Fire in a train carrying passengers not falling under B1 above but resulting in **i.** damage to Railway property is 50,000 or above and up-to 2 crores, and/or **ii.** interruption to traffic is more than the—threshold Value, and/or detaching of coaching stock from the train.
B4	Fire in a train not carrying passengers and not falling under B.2 above, but resulting in **i.** damaged to Railway property is50,000 or above and up-to 2 crores, and/or **ii.** interruption to traffic is more than the threshold value, and/or **iii.** detaching of goods stock from the train.
B5	Fire in a train carrying passengers but not falling under B.1 or B.3 above.
B6	Fire in a train not carrying passengers but not falling under B.2 or B.4 above.
B7	Fire occurring in shunting, marshalling yards, loco yards, and sidings etc., involving rolling stock but not involving a train.
Note: I) in case of an inquiry by a committee into a fire accident in Railway premises or in a train leading to damage to railway property and/or booked consignments, a representative of the Railway Protection Force should also be included as a member of the committee.	

24.7.3 Class 'C' – Level Crossing

(Train running into road traffic, and/or road traffic running into trains at level crossings.)

Sub-Class	Type of Accidents
C1	Trains carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings resulting in **i.** loss of human life and/or grievous hurt, and/or **ii.** damage to railway property, which is more than the threshold value, and/or **iii.** interruption to traffic which is more than the threshold value.
C2	Trains not carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings resulting in **i.** loss of human life and/or grievous hurt, and/or **ii.** damage to railway property which is more than the threshold value and/or **iii.** interruption to traffic which is more than the threshold value.
C3	Trains carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings resulting in **i.** loss of human life and/or grievous hurt, and/or **ii.** damage to railway property which is more than the threshold value and/or **iii.** interruption to traffic is more than the threshold value.
C4	Trains not carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings resulting in **i.** loss of human life and/or grievous hurt and/or **ii.** damage to railway property and/or **iii.** interruption to traffic is more than the threshold value.
C5	Trains carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings but not falling under C.1.

C6	Trains not carrying passengers running into road traffic and/or road traffic running into such trains at manned level crossings but not falling under C.2.
C7	Trains carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings but not falling under C.3
C8	Trains not carrying passengers running into road traffic and/or road traffic running into such trains at unmanned level crossings but not falling under C.4.
C9	Shunting engine, with or without vehicles, or loose vehicles running into road traffic and/or road traffic running into shunting engine with or without vehicles or loose vehicles, at level crossings.
Note: If a road vehicle is not capable of being physically cleared off the track promptly by a single person operating it, it should be termed as road traffic for the purposes of classifying such an accident as a train accident irrespective of its mode of traction.	

24.7.4 Class 'D' – Derailments

Sub-Class	Type of Accidents
D1	Derailment of a train carrying passengers and resulting in **i.** loss of human life and/or grievous hurt and / or **ii.** damage to railway property with value exceeding 2 crores, and / or **iii.** interruption of running on any important through line for at least 24 hours.
D2	Derailment of a train not carrying passengers and resulting in **i.** loss of human life and/or grievous hurt, and / or **ii.** damage to railway property with value exceeding2 crore, and / or **iii.** interruption of running on any important through line for at least 24 hours.
D3	Derailment of a train carrying passengers, but not falling under D.1 above.
D4	Derailment of a train not carrying passengers and not falling under D.2 above, but loss to railway property and/or interruption to traffic which is more than he threshold value.

D5	Derailment of a train not carrying passengers and not falling either under D.2or D.4 above.
D6	Other derailments, i.e., derailments occurring in shunting, marshalling yards, loco yards, and sidings etc., but not involving a train.

24.8 Indicative Accidents

24.8.1 Class 'F' - Averted collisions

Sub-Class	Type of Accidents
F1	Averted collision between trains, at least one of which is carrying passengers.
F2	Averted collision between a train carrying passengers and an obstruction.
F3	Averted collision between trains not carrying passengers.
F4	Averted collision between a train not carrying passengers and an obstruction.

24.8.2 Class 'G' - Breach of block rules

Sub-Class	Type of Accidents
G1	Trains carrying passengers entering a block section without any authority to proceed or without a proper 'Authority to proceed.'
G2	Trains not carrying passengers entering a block section without any authority to proceed or without a proper 'Authority to proceed.'
G3	Train received on a blocked line, but not constituting an averted collision.
G4	Train received on/or entering a wrong line at a station or catch siding or slip siding or sand hump etc.

24.8.3 Class 'H'– Train passing signal at danger.

Sub-Class	Type of Accidents
H1	Train carrying passengers running past a stop signal at danger without proper authority.
H2	Train not carrying passengers running past a stop signal at danger without proper authority.

24.9 Equipment Failure-

24.9.1 Class 'J'– Failure of engine and rolling stock.

Sub-Class	Type of Accidents
J1	Failure of engine hauling a train carrying passengers.
J2	Failure of engine hauling a train not carrying passengers, or failure of light engine.
J3	Parting of train carrying passengers.
J4	Parting of a train not carrying passengers.
J5	Failure of rolling stock, such as failure of tyres, wheels, axles, or braking apparatus etc., on a train carrying passengers and leading to detachment of rolling stock from the train.
J6	Failure of rolling stock, such as failure of tyres, wheels, axles, or braking apparatus etc., on a train not carrying passenger leading to detachment of rolling stock/stocks from the train.
J7	Failure of rolling stock, such as failure of tyres, wheels, axles, or braking apparatus etc., on a train carrying passengers and not leading to detachment of rolling stock from the train.
J8	Failure of rolling stock, such as failure of tyres, wheels, axles, or braking apparatus etc., on a train not carrying passengers, and not leading to detachment of rolling stock from the train.
J9	A train or a portion of a train running away or out of control.
J10	Poor brake power in a train but not covered in class J.9.

24.9.2 Class 'K'– Failure of Permanent Way

Sub-Class	Type of Accidents
K1	Buckling of track.
K2	Weld failure.
K3	Rail fracture.
K4	An unusually slack or rough running or heavy lurch experienced by Loco Pilots of running trains while passing over any length of permanent way leading to interruption in train running.
K5	Failure of railway tunnel, bridge, viaduct/ formation/ cutting, culvert, etc.
K6	Damage to track of such a nature other than those covered under Class K.1 to K.5 so as to render it temporarily unsafe for

	passage of trains or likely to cause delay to traffic for a period above threshold value.
K7	Damage to track of such a nature as to render it temporarily unsafe for the passage of trains or likely to cause delays to traffic not covered under class K.1 toK.6.
Note: In the above classification, those cases detected during regular maintenance and not affecting train movement will not be counted.	

5.9.3 Class L – Failure of Electrical equipment

Sub-Class	Type of Accidents
L1	Snapping of or any damage to OHE, requiring switching off of OHE for more than three minutes.
L2	No OHE for more than three minutes.
L3	Pantograph entanglement not covered under J.1 and J.2
L4	Defect in AC or other electrical equipment leading to detachment of rolling stock from a train.

5.9.4 Class M - Failure of Signalling and Telecommunication Equipment.

Sub-Class	Type of Accidents
M1	Failure of part or complete panel/RRI.
M2	Failure of interlocking, track circuit or axle counter.
M3	Failure of block instruments.
M4	Failure of point machine and related equipment.
M5	Failure of signal, point.
M6	Failure of control/station communication for more than fifteen minutes.
M7	Failure of station-to-station communication or station to level crossing gate communication for more than 15 minutes
Note: Signalling and telecommunication failures which were not informed to S&T department will not be considered for failure.	

24.10 Unusual Incidents

24.10.1 Class 'N'- Train Wrecking or attempted train wrecking or Sabotage to a train

Sub-Class	Type of Accidents
N1	Train wrecking or attempted wrecking or Bomb Blast or Explosion or Hijacking or sabotage to a train carrying passengers with or without loss of human life and / or grievous hurt and / or damage to Railway property.
N2	Train wrecking or attempted wrecking or Bomb Blast or Explosion or Hijacking or sabotage to a train not carrying passengers with or without loss of human life and / or grievous hurt and / or damage to Railway property.
N3	Train wrecking or attempted wrecking or Bomb Blast or Explosion Or sabotage to signalling and track or forceful confinement of train running staff on duty and / or passengers but not involving a train.

24.10.2 Class 'P'– Casualties

Sub-Class	Type of Accidents
P1	Person or persons falling out of a running train resulting in loss of human life or grievous hurt.
P2	Person or persons run over or knocked down by a train resulting in loss of human life or grievous hurt.
P3	Person or persons falling out of a running train or knocked down by a train or engine or railway vehicle but not resulting in loss of human life or grievous hurt.

24.10.3 Class 'Q'– Other incidents

Sub-Class	Type of Accidents
Q1	Accidental or natural death or grievous hurt to any person, whether passenger/railway employee/ trespasser (or any other person), within railway premises (excluding railway quarters).
Q2	Murder or suicide in a train or within railway premises.
Q3	Robbery, attempted robbery, theft, or attempted theft in railway premises, including trains.
Q4	Fire or explosion within railway premises but not involving trains.
Q5	Fire or explosion resulting in damage to railway bridge and

	viaduct etc.
Q6	Blockade to train services due to agitation.

24.10.4 Class 'R'– Miscellaneous

Sub-Class	Type of Accidents
R1	Vehicle or vehicles running away.
R2	Train running over cattle.
R3	Floods, breaches, and landslides etc., resulting in interruption of traffic in an important through line for more than the threshold value.
R4	Other cases of floods, breaches, landslides etc., resulting in interruption to traffic.
R5	Any accident not included in foregoing classifications.
Note: **1.** The term 'cattle' does not include sheep, goats, pigs, dogs, donkeys, rams, ewe, and lambs.	
Note: **2.** A train includes a trolley, lorry, motor trolley, when worked under the rules for working of trains.	

24.11 Reportable Train Accidents:

All accidents falling under the purview of Section 113 of the Railway Act 1989 are termed as reportable train accidents and include following: -

(a) any accident attended with loss of any human life, or with grievous hurt.

(b) any collision between trains of which one is a train carrying passengers.

Or

(c) the derailment of any train carrying passengers, or of any part of such train; or

(d) accidents which are attended with loss of human life in passenger trains involving train wrecking, or attempted train wrecking, cases of running over obstructions placed on the line, of passengers falling out of train or of fires in trains, or grievous hurt as defined in the Indian Penal Code, or serious damage to railway property of the value exceeding rupees

twenty five lakhs which have not actually occurred but which by the nature of the accident might reasonably have been expected to occur and also cases of landslides or of breach by rain or flood which cause the interruption of any important through line of communication for at least 24 hours.

24.12 Serious Accident:

Accident to a train carrying passengers which is attended with loss of life or with grievous hurt to a passenger or passengers in the train, or with serious damage to railway property of the value exceeding Rs.25,00,000 and any other accident which in the opinion of the Chief Commissioner of Railway Safety or Commissioner of Railway Safety requires the holding of an inquiry by the Commissioner of Railway Safety shall also be deemed to be a serious accident. However, the following shall be excluded: -

(a) cases of trespassers run over and injured or killed through their own carelessness or of passengers injured or killed through their own carelessness.

(b) cases involving persons being Railway servant or holding valid passes/tickets or otherwise who are killed or grievously injured while travelling outside the rolling stock of a passenger train such as on foot board or roof or buffer but excluding the inside of vestibules between coaches, or run over at a Level Crossing or elsewhere on the Railway track by a train; and

(c) Level crossing accident where no passenger or Railway Servant is killed or grievously hurt unless the Chief Commissioner of Railway Safety or Commissioner of Railway Safety is of the opinion that the accident requires the holding of an inquiry by the Commissioner of Railway Safety.

24.13 Reporting of Accident:

(a) To Railway Board: A telephonic advice should be relayed to nominated officer in Railway Board's Office immediately after the accident in case of following categories of accidents: -

(i) All consequential train accidents.

(ii) Any yard accident having serious repercussion on movement of traffic on through/main line resulting in dislocation of traffic more than the threshold value as indicated above.

(iii) Landslides, breaches, OHE breakdown etc. which result in dislocation of traffic more than the threshold value as indicated above.

In addition to this, periodic(monthly) statement of Accidents in all categories shall be submitted to Railway Board in prescribed proforma.

(b) To Zonal Railway: A telephonic advice should be relayed to nominated officer in Zonal HQ immediately after the accident in case of following categories of accidents: -

(i) All train accidents.

(ii) Any yard accident having serious repercussion on movement of traffic on through line resulting in dislocation of traffic more than the threshold value as indicated above.

(iii) Landslides, breaches, OHE breakdown etc. which result in dislocation of traffic more than the threshold value as indicated above.

In addition to this periodic (monthly) statement of Accidents in all categories shall be submitted to Zonal Headquarter in prescribed proforma.

24.14 Level of Enquiry:

(i) All serious accident shall be inquired into by the Commissioner Railway safety.

(ii) In case of Commissioner of Railway Safety or Chief Commissioner of Railway Safety is not in a position

to inquire into the serious accident cases the Inquiry shall be done by JA Grade Inquiry Committee.

(iii) All other consequential train accidents except Unmanned Level Crossing Accidents shall be inquired into by a committee of JA grade officers and in its absence by Branch officers. Consequential Unmanned Level Crossing Accidents shall be inquired into by a Committee of Junior Scale Officers.

(iv) All other train accidents shall be inquired by a committee of Senior scale or Junior Scale Officers as decided by respective DRMs.

(v) All yard accidents shall be inquired into by a Committee of Senior Supervisors

(vi) Safety Officer shall be one of the members of all Departmental Accident Inquiry Committee. In case Safety Officer in same grade as of the inquiry committee is not available in the Division, Safety Officer of one grade below may be nominated for the Inquiry Committee.

(vii) All cases of indicative Accidents shall be inquired into by a Committee of Junior Scale Officers.

(viii) All cases of equipment failure shall be inquired into by a Senior Supervisors/Supervisors of respective departments.

24.15 Rules for the preparation of accident returns:

(i) Accidents to trains shall be accounted for by the Railway which exercises jurisdiction over the site of accident. Engine failures shall be accounted for by the Railway owning the engines.

(ii) A train intended solely or partly for the carriage of passengers shall be treated as passenger train. All other trains will come under the category of other trains.

(iii) Statistical returns in the prescribed proforma showing cumulative data till the end of the month should be submitted so as to reach Board's Office not later than 7th Day of the next month.

(iv) Only those accidents which have occurred during the period to which the returns relate shall be included in the relevant returns. With regard to the accidents where details are not available at the time of forwarding the returns for any reason, such accidents are to be included in the statement with a clear indication that further details would follow.

(v) Each accident must be shown only once and in the event of an accident falling in more than one category, it should be treated as an accident in the higher category.

(vi) Derailments or bumping during reversing or shunting operations etc. on an incoming, outgoing or any other load, including a sectional carriage, etc. shall be deemed to be a 'train accident' only when the train engine or a vehicle still forming a part of the train derails or as a result of bumping casualty (including injuries) or loss to Railway property takes place, irrespective of whether the shunting was being done by the train engine or by a shunting engine.

(vii) Interruption is defined as duration from the time of accident till starting of first train on-line clear from adjacent station for movement over the affected line in that section.

(viii) Statistics of fire should include all cases of physical fire or smoke emission resulting in death or injury or damage to property amount to Rupees 5000 and above.

(ix) Equipment failure shall include all failures irrespective of date of last schedule or examination

and shall be subsequently classified under avoidable or unavoidable category.

(x) Details and Statistics for accident cases falling under unusual incident categories "N", "P" and "Q" shall be maintained and provided by Security (RPF) Branch.

(xi) DRM at the Divisional level and the General Manager at the Zonal Headquarters level will ensure the correct reporting of accidents to Zonal Headquarters and the Railway Board respectively.

24.16 Collection, Compilation and Monthly statement of Accident Statistics: -

(a) Information about train accidents, yard accidents and indicative accidents falling under classification A, B, C, D, E, F, G and H will be compiled by the Safety Branch at Divisional and Zonal Railways.

(b) Equipment failure falling under classification J, K, L and M will be compiled by the Divisional control on daily basis and shall be handed over to Safety Branch. Every equipment failure shall be classified under the category of avoidable and unavoidable by the Branch Officers concerned and summary shall be handed over to Safety Department of the Division. It is further clarified that all equipment failures should be taken into account irrespective of the date of last schedule or examination and shall be subsequently classified under avoidable or unavoidable category as the case may be. The Safety Branch shall forward the monthly summary to Chief Safety Officers of respective Zonal Railways. Chief Safety Officers after compilation of statement shall forward monthly statement to the Safety Directorate of Railway Board.

(c) Unusual incidents falling under classification N, P and Q shall be collected and compiled by the Security (RPF) Branch at Divisional level and they shall take

subsequent follow up action. Daily position will be given to the Safety Branch of the Division who after compilation of statistics shall forward monthly statement to Chief Safety Officers of the Zonal Railways concerned. Chief Safety Officers after compilation of statement shall forward monthly statement to the Safety Directorate of Railway Board.

Following system will be followed for reporting of accident to Railway Board: -

(a) Information regarding consequential train accident and any yard accident leading to serious repercussion shall be reported by Divisional Control to Headquarters Central Control of Zonal Railway Headquarters. Central Control shall in turn inform all concerned at Headquarters office including GM, PHODs etc.

(b) In case of accidents as in para (a) above, Chief Safety Officer/Dy COM(Safety) should thereafter inform nominated officer of Safety Directorate of Railway Board. At Board level Safety Directorate shall issue the message and take follow up action.

(c) In case of land slide, breaches, OHE break down etc. which result in dislocation of more than threshold value and also cases due to public agitation shall be reported by Headquarters Control Office to Punctuality Cell of Railway Board and dealt with by the Coaching Directorate.

(d) Cases falling under N, P and Q except Q-6 i.e. blockade of train services due to public agitation; shall be dealt with by Security Directorate.

INDIAN RAILWAYS ACCIDENT PROTOCOL

25

An accident protocol is a standard set of activities / procedures of reporting and handling Serious Accident. It describes methods and practices for reporting and handling serious train accidents that can be read and understood by all.

Definitions of accident, serious accident, reportable accident, consequential train accident, indicative accidents, unusual incidents, miscellaneous accidents/incidents etc. have been given in various statutory documents/manuals. They are as follows-

1. **The Railways Act, 1989**
2. **The Statutory Investigation into Railway Accidents Rules, 1998**
3. **The Railway (Notices of Inquiries into Accidents) Rules, 1988**
4. **Accident Manuals issued by various Zonal Railways**

Accident Manuals are prepared and updated by all Zonal Railways which deals with classification of accidents, duties of different categories of officials in the event of serious accidents, reporting of accidents, rescue and relief works/machinery, ex-gratia payments, investigation and inquiries of accidents, procedure for dealing with cases of Sabotage/Train wrecking,

Disaster Management etc.

There is a statutory organization known as The Commission of Railway Safety under the administrative control of Ministry of Civil Aviation since 1942 with following statutory duties-

1. Investigations into Serious Railway Accidents.
2. Statutory Inspection of New Railway lines
3. Sanction of Minor Works
4. Sanction of Condonation of infringements to Schedule of Dimensions.
5. Periodical Inspection of open lines.

Accident inquiries done by Commissioner of Railway Safety (in case of serious accident) or by departmental officials (in case of other accident) are separately dealt with by various Acts, Rules and guidelines issued by Ministry of Railways from time to time. For the sake of brevity, the accident inquiry and related subjects have not been included in the Accident Protocol.

Apart from the serious accidents due to Collisions, Derailments, Fire in Train, Level Crossing Accidents, etc. there are other unusual incidents - Train wrecking, Bomb Blast, Explosion, Hijacking, Sabotage, persons falling out of train, run over cases, accidental death, natural death, murder, suicide, robbery, blockade, landslides, breaches, flash floods, OHE breakdown etc., resulting into loss of life, grievous injury, substantial loss to Railway property, disruption of traffic. Security Directorate and Coaching Directorate deals with the unusual incidents as far as reporting is concerned, however, relief, rescue, and restoration of work after such unusual incidents is done by the different arms of the Railway system.

25.1 Accident

Accident is an occurrence while working of railway which does or may affect the safety of the railway, its engines, rolling stock, permanent way and works, fixed installations, passengers, or

railway servants or which affects the safety of others, or which does or may cause delay to train or loss to the railway. For statistical purposes, accidents have been classified in categories from "A" to "R" excluding "I" and "O". (Railway Board's L.No.2000/Safety (A&R)/19/20, dated 13.12.2000).

25.2 Serious Accident: (Accident Manual of Zonal Railways)

Accident to a train carrying passengers which is attended.

- **a)** With loss of life, or
- **b)** With grievous hurt to a passenger or passengers in the train, or
- **c)** with damage to railway property, the value of which exceeding Rupees Two Crores (Rs.200,00,000/-), and
- **d)** Any other accident, which in the opinion of the Chief Commissioner of Railway Safety or Commissioner of Railway safety requires holding of an inquiry by the Commissioner of Railway Safety, shall be deemed to be a serious accident.

However, the following shall be excluded from the category of a serious Accident:

- **i.** Cases of trespassers run over and injured or killed through their own carelessness, or of passengers injured or killed through their own carelessness.
- **ii.** Cases involving railway servants or holding valid passes/tickets, or otherwise who are killed or grievously injured while travelling outside the rolling stock of a passenger train such as on foot board, or roof or buffer but excluding the inside of vestibules between coaches, or run over at a level crossing or elsewhere on the railway track by a train, and
- **iii.** Level crossing accident where no passenger or railway servant is killed or grievously hurt, unless the Chief Commissioner of Railway Safety or Commissioner of Railway safety is of the opinion that the accident requires the holding of an inquiry by the Commissioner of Railway Safety

25.3 Consequential Train Accidents: (Accident Manual of Zonal Railways)

Consequential Train Accidents include train accidents having serious repercussion in terms of-

1. loss of human life,
2. human injury,
3. loss to railway property, or
4. Interruption to rail traffic.

25.4 Unusual Incidents: (Accident Manual of Zonal Railways)

Unusual Incidents include cases related to law and order resulting in train accidents or not resulting in train accidents and other incidents as follows-

a) Attempted Train wrecking or Train wrecking or Bomb Blast or Explosion or Hijacking or Sabotage.

b) Incident of – Persons falling out of train or run over.

c) Other Incidents – Accidental death or Natural death or murder or suicide or robbery or blockade to train services.

d) Miscellaneous – Vehicles running away or train running over cattle or floods / breaches and landslides etc.

All such cases shall be handled by the Security branch of Division / Zone. (Railway Board's L.No.2000/Safety (A&R)/19/20, dated 13.12.2000)

25.5 Miscellaneous Incidents: (Accident Manual of Zonal Railways)

These include cases of -

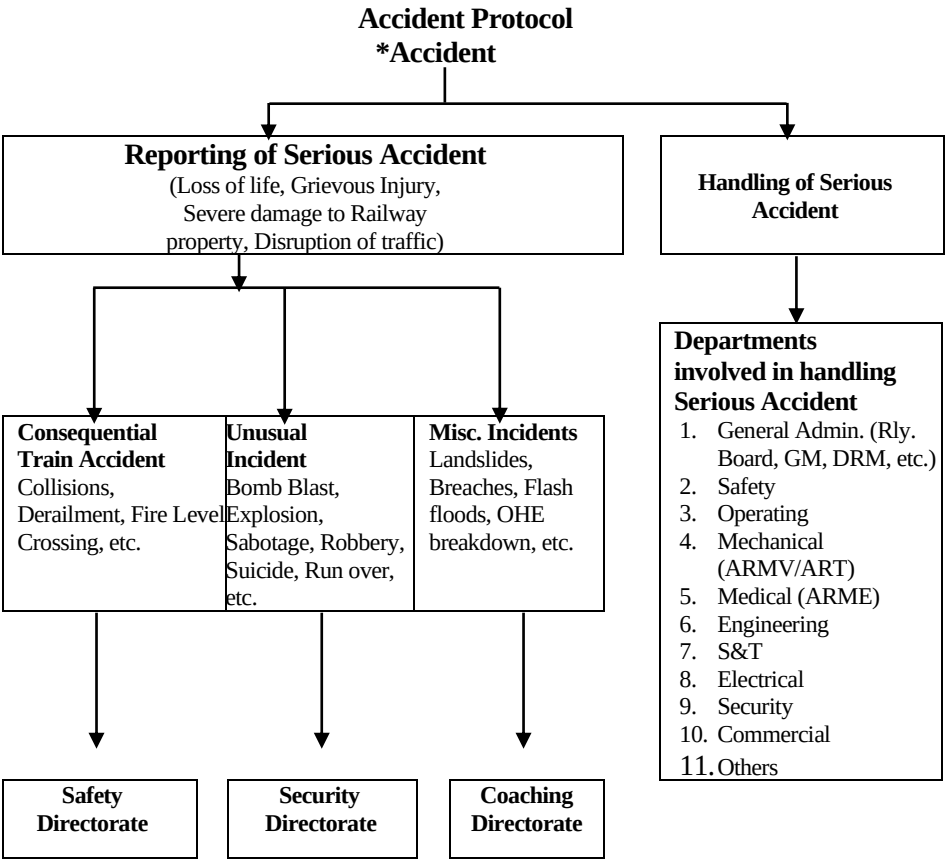
a) Vehicle or vehicles running away.

b) Train running over cattle.

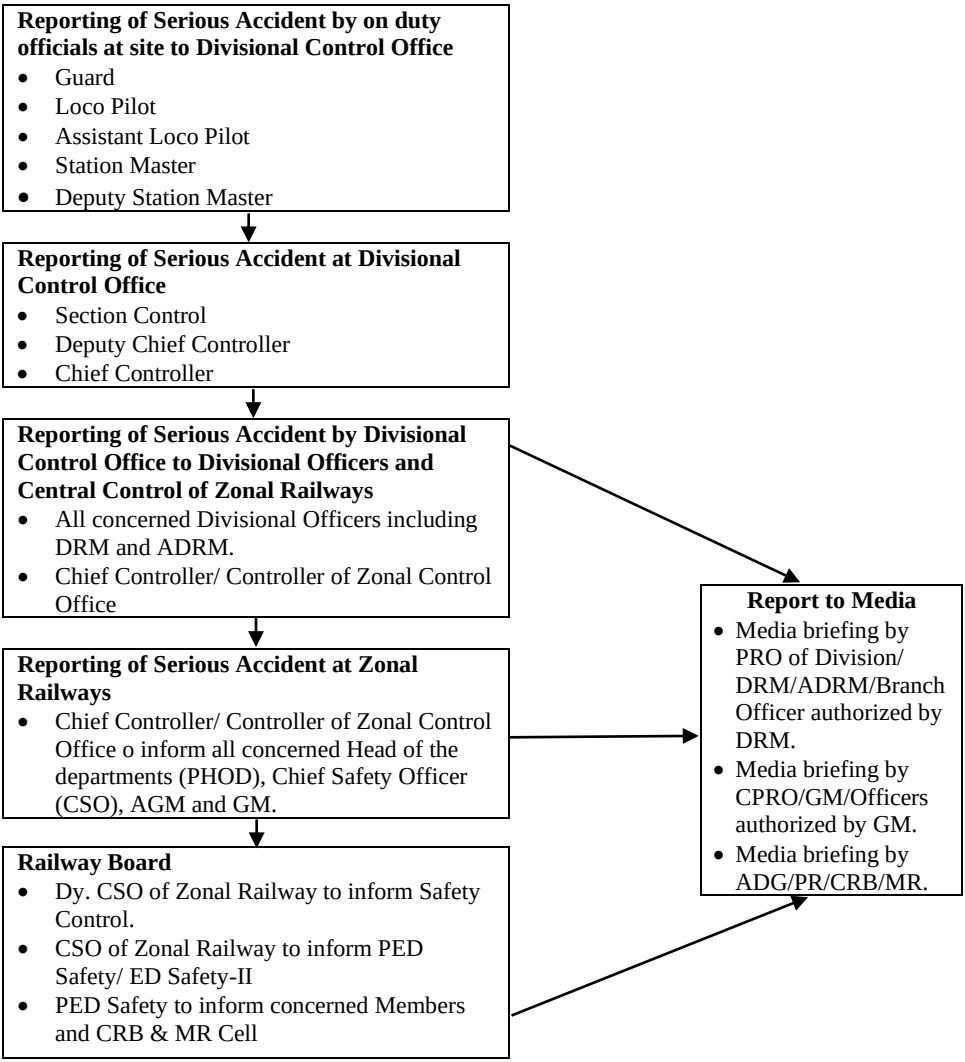
c) Floods, breaches, and landslides etc. resulting in interruption of traffic in an important through line for more than the threshold value.

d) Other cases of floods, breaches, landslides etc., resulting in interruption to traffic.

e) Any accident not included in foregoing classifications.


Accident Protocol
*Accident
Reporting of Serious Accident
(Loss of life, Grievous Injury, Severe damage to Railway property, Disruption of traffic)
Handling of Serious Accident
Departments involved in handling Serious Accident
1. General Admin. (Rly. Board, GM, DRM, etc.)
2. Safety
3. Operating
4. Mechanical (ARMV/ART)
5. Medical (ARME)
6. Engineering
7. S&T
8. Electrical
9. Security
10. Commercial
11. Others
Consequential Train Accident
Collisions, Derailment, Fire Level Crossing, etc.
Unusual Incident
Bomb Blast, Explosion, Sabotage, Robbery, Suicide, Run over, etc.
Misc. Incidents
Landslides, Breaches, Flash floods, OHE breakdown, etc.
Safety Directorate
Security Directorate
Coaching Directorate

Channel of Reporting Serious Accident



Handling of Serious	
Serious Accident	
Role of on duty officials available at site in handling Serious Accident	**Role of Officials of various departments sent to the site to handle Serious Accident after receipt of information**
• Guard	
• Loco Pilot	
• Assistant Loco Pilot	• Traffic
• Train Conductor / Superintendent	• Official -in-charge at site safety
• Travelling Ticket Examiner (TTE)	• Medical
• Coach Attendant	• Commercial
• AC mechanic	• Mechanical
• Station Master	• Electrical
• Deputy Station Master	• Engineering
• RPF Officer	• S&T
• Travelling Railway Staff	• Security
• OBHS staff / C&W escorting Staff	• General administration (DRM / ADRM)

Role of Officials of various departments in handling Serious Accident remotely (not at site)

- Official-in-charge of concerned station
- Officer-in-charge of Divisional Control Office
- Officer-in-charge of Transshipment
- Diesel Power Controller / Traction Loco Controller
- Sr. Divisional Operations Manager
- Other Divisional Officers
- DRM / ADRM
- PCCM
- PCOM
- Other PHODs
- GM
- Member of Railway Board
- CRB & CEO
- MOSR
- MR

25.6 Notice of Railway Accident - (Section 113 of The Railways Act, 1989)

I) Where, in the course of working a railway, —

(a) any accident attended with loss of any human life, or with grievous hurt, as defined in the Indian Penal Code (45 of 1860), or with such serious injury to property as may be prescribed; or

(b) any collision between trains of which one is a train carrying passengers; or

(c) the derailment of any train carrying passengers, or of any part of such train; or

(d) any accident of a description usually attended with loss of human life or with such grievous hurt as aforesaid or with serious injury to property; or

(e) any accident of any other description which the Central Government may notify in this behalf in the Official Gazette, occurs, the station master of the station nearest to the place at which the accident occurs or where there is no station master, the railway servant in charge of the section of the railway on which the accident occurs, shall, without delay, give notice of the accident to the District Magistrate and Superintendent of Police, within whose jurisdiction the accident occurs, the officer in charge of the police station within the local limits of which the accident occurs and to such other Magistrate or police officer as may be appointed in this behalf by the Central Government.

II) The railway administration within whose jurisdiction the accident occurs, as also the railway administration to whom the train involved in the accident belongs, shall without delay, give notice of the accident to the State Government and the Commissioner having jurisdiction over the place of the accident.

25.7 Reportable Train Accidents:

(Railway Board's L.No.2000/Safety(A&R)/19/20, dated 13.12.2000)

All accidents falling under the purview of section 113 of the Railways Act of 1989 are termed as reportable train accidents

and include the following:

(a) Any accident caused the loss of any human life or with grievous hurt.

(b) Any collision between trains of which one is a train carrying passengers.

(c) The derailment of any train carrying passengers

(d) Accidents which are attended with loss of human life in passenger carrying trains due to train wrecking or attempted train wrecking; cases of trains running over obstructions placed on the line; or passengers falling out of train; fire on train; grievous hurt as defined in the Indian Penal Code; serious damage to railway property of the value exceeding Rupees Two Crores (Rs.200,00,000/-). Cases of landslides, breaches by rain/ flood which cause interruption of through running on any important route for at least 24 hours, should also be reported.

Provisions of Reporting Serious Accident in The Railway (Notices of and Inquiries into accidents) Rules, 1998

Rule (2) Particulars to be given in the notices. —

The notices mentioned in section 113 of the Railways Act, 1989 (24 of 1989) (hereinafter referred to as the Act), shall contain the following particulars, namely: —

i. Kilometerage, or station, or both, at which the accident occurred.
ii. time and date of the accident.
iii. number and description of the train, or trains.
iv. nature of the accident.
v. number of people killed or injured, as far as is known.
vi. cause of the accident, as far as is known; and
vii. probable detention to traffic.

Rule (3) Responsibility for sending notices, to whom to be sent and mode thereof. —

Whenever any accident, as falls under section 113 of the Act (hereinafter referred to as "Reportable train accident") occurs

in the course of working a railway, the Station Master nearest to the place at which the accident has occurred or, where there is no Station Master, the railway servant in charge of the section of the railway on which the accident has occurred or any other Station Master in charge of a section of a railway to whom the report of the accident is made, shall give notice of the accident by telegraph* to the Commissioner of Railway Safety, the District Magistrate and the District Superintendent of Police of the district in which the accident has occurred or such other Magistrate or police officer as may be appointed in this behalf by the State Government concerned and by telegraph, telephone or through special messenger or such other quick means as may be available, to the Superintendent of Railway Police and to the officer-in-charge of the police station within the local limits of which the accident has occurred.

Explanation.—For the purpose of this rule, "Reportable Train accident" under section 113 of the Act also includes those usually attended with loss of human life (such as accidents to passenger trains involving collisions, derailments, train-wrecking, or attempted train-wrecking, cases of running over obstructions placed on the line, of passengers falling out of trains or of fires in trains), or grievous hurt as defined in the Indian Penal Code (hereinafter referred to as the grievous hurt), or serious damage to railway property of the value exceeding Rupees Two Crores (Rs.200,00,000/-) which have not actually occurred but which by the nature of the accident might reasonably have been expected to occur; and also cases of landslides or of breach by rain or flood which cause the interruption of any important through-line of communication for at least 24 hours.

Rule (4) Mode of sending notices to the State Government. — The notice of accidents, required under section 113 of the Act, to be sent without delay by the Railway

Administration, shall be sent to the State Government—

(a) by telegram in the case of—

1. accidents deemed, under the Explanation to Rule 3, to be serious by reason of loss of human life.
2. accidents by reason of which the permanent way is likely to be blocked for more than twenty-four hours; and
3. train-wrecking or attempted train-wrecking; and

(b) by letter in all other cases.

Rule (5) Railway servants to report accidents. —

Every railway servant shall report, with as little delay as possible, every accident which comes to his notice in the course of his duty. Such report shall be made to the nearest Station Master, or, where there is no Station Master, to the railway servant in charge of the section of the railway on which the accident has occurred.

Rule (6) Station Master or railway servant in charge of the section to report accidents. —

The Station Master or the railway servant in charge of the section, shall report all accidents in accordance with the rules laid down by the Railway Administration concerned for the reporting of accidents.

Rule (6A) Responsibility of ensuring correct reporting of accidents. —

The responsibility of ensuring correct reporting of accidents shall be with the Divisional Railway Manager (DRM) at Divisional Level and the General Manager (GM) at Zonal Level.

Rule (7) Railway Administration to report serious accidents.

(1) Whenever a serious accident as defined in sub-rule (2) of Rule 2 of the Statutory Investigation into Railway Accidents Rules, 1998 occurs, the railway administration concerned shall, as soon after the

accident as possible, by telegraph, supply to the Press such particulars as are mentioned in Rule 2 and as are till then available, and by supplementary telegrams, if necessary, immediately after further information is available. A copy shall be sent simultaneously by express telegram to the Railway Board, the Commissioner of Railway Safety of the circle concerned and the Chief Commissioner of Railway Safety. In addition, the Commissioner of Railway Safety shall be informed, telephonically, of any serious accident, by the control of the division in which the accident has occurred.

(2) For the purpose of sub-rule (1), an accident shall be a serious railway accident where—

(i) accident to a train carrying passengers which is attended with loss of life or with grievous hurt to a passenger or passengers in the train, or with serious damage to railway property of the value exceeding Rupees Two Crores (Rs.200,00,000/-) and any other accident which in the opinion of the Chief Commissioner of railway Safety or Commissioner of Railway Safety requires the holding of an inquiry by the Commissioner of Railway Safety, shall be deemed to be a serious accident. A workmen's train or a ballast train carrying workmen or cattle special train or a tower wagon or such other train carrying workmen or cattle special, military special carrying authorized escorts, or similar such train shall be treated as a passenger train.

(ii) an accident involving a train carrying passengers leads to loss of life or grievous injury to any railway servant irrespective of whether he was travelling in that passenger train or not, it shall come under the purview of inquiry by the Commission of railway Safety and shall be treated as a serious railway accident': Provided that—

(a) cases of trespassers run over and injured or killed through their own carelessness or of passengers injured or killed through their own carelessness, and

(b) cases involving persons being railway servants or holding

valid passes/tickets or otherwise who are killed or grievously injured while travelling outside the rollingstock of a passenger train such as on footboard or roof or buffer but excluding the inside of vestibules between coaches, or run over at a level crossing or elsewhere on the Railway track by a passenger train, and

(c) collision, between a Road Vehicle and a passenger train at a Level Crossing where no passenger or Railway Servant is killed or grievously hurt shall not be treated as a Serious Railway Accident even if those travelling in the road vehicle are killed or grievously hurt shall not be treated as serious railway accident, unless the Chief Commissioner of Railway Safety or Commissioner of Railway Safety is of the opinion that the accident requires the holding of an inquiry by the Commissioner of Railway Safety.

25.8 Reporting of Serious Accident by on duty officials at site to Divisional Control Office (Accident Manual of Zonal Railways)

Guard

A) Guard of the Train Involved in Accident:

The duties are given in the sequence in which they have to be performed. On occurrence of an accident to his train, the Guard of the train shall immediately:

1. Note the time of accident.

2. Make a quick survey of the accident site for casualties, injuries, if any, and to decide the assistance required.

3. Send the first information of accident to the control office and then to the nearest Station Master furnishing the following information, through mobile phone or portable telephone, or walkie-talkie or gate phone, etc.,

i. Time of Accident,

ii. Kilometer etc.

4. On the double line section, a train passing on the other line should be stopped and the Loco Pilot and Guard given intimation about the accident.

Driver (Loco Pilot)

B) Engine Crew of the Train Involved in Accident:

On occurrence of an accident to a train, its crew shall:

1. Immediately switch on the Flasher Light. If the flasher light is not working, exhibit hand danger signals so as to stop any train coming in the opposite direction on a double line section.
2. Give information to Guards about the locomotive (derailed or not), condition of coaches/wagons immediately in rear of the loco and any other information relevant to the accident.

Station Master

C) Station Master / Station Manager:

The Station Masters on either side of the block section if the accident occurred in the mid-section or the station master of the station where the accident has occurred.

1. On a double line, immediately stop the trains proceeding into the affected block section in the opposite direction. If any train has already entered such a block section, inform the crew and guard to immediately stop their train and tell them to proceed cautiously so as to stop short of any obstruction.

2. Report the accident to the Section Controller and to the Station Master at the other end of the block section.

3. Control to be advised regarding –

- **a.** Time and nature of accident.
- **b.** Brief description of accident.
- **c.** Medical Relief van required or not.
- **d.** The need for ART with or without crane
- **e.** Adjacent lines clear or not.
- **f.** Number of coaches/wagons derailed, canted, capsized, etc.,
- **g.** Availability of road approach to the accident site,

4. Station Masters of Stations where sirens are provided shall sound the sirens and arrange to move the Medical Relief Van / ART special trains as per the control orders.

5. Advise the section Traffic Inspector and the officials of other

departments by the quickest possible means.

6. Call for off-duty Station Masters and Points men for assistance in operations.

Reporting of Serious Accident by Divisional Control Office to Divisional Officers and Central Control of Zonal Railways

Section Controller-

Immediately when the Section Controller is informed of a serious accident in his section, he shall.

a) apprise the Deputy Chief Controller of the available particulars of the accident and the nature of assistance required.

b) advise the Transportation Inspector, Signal Inspector, Loco Inspector, PWI, etc. through respective controls to proceed to the site of accident by first available means.

c) advise the Section Controllers of adjacent sections of the accident and to regulate the train services in suitable places if required.

Deputy Chief Controller-

Immediately after the Deputy Chief Controller is informed of a serious accident, he shall –

a)

i. issue order to the concerned SSE/Loco through respective control and Station Master for immediately working out of Accident Relief Medical Equipment and Accident Relief Train as required.

ii. place demand of ARME immediately without delay, on the division closest/most accessible to the accident site.

NB – The Division on whom the demand of ARME is placed should respond in the quickest possible manner and dispatch the ARME with the least possible delay.

b) Ensure that the Accident Alarm siren is sounded in time.

c) Inform with available details –

i) CHC, Sr. DSO/DSO, DRM, ADRM, Sr. DOM, DOM, AOM, **CMS/ Sr**. DMO.

ii) Sr. DEN/DEN, Sr. DCM/DCM, Sr. DEE/DEE, Sr.

DME/DME, Sr. DSTE/DSTE.

iii) the concerned OC/GRP, OC/RPF, DM, SDO, DC, IRP, DSP, SRP, OC-Local Police, NDRF and nearest Forensic Science Laboratory.

iv) Emergency/Central Control at Zonal Headquarters.

v) Civil, Military, public hospitals, and available Doctors at the nearest places, in case of casualty/injury.

d) Advise RMS authorities if a Mail carrying train is involved in the accident.

Chief Controller

Immediately on receipt of the information of a serious accident, he shall ensure that the advice of the accident is sent to all concerned including information to the Central Control of Zonal Railway.

Safety Officer

Sr. Divisional Safety Officer / Divisional Safety Officer / Asst. Divisional Safety Officer– Safety Branch of the Division should inform the details of accident to the PCSO/Dy. CSO of Zonal Railways through call on landline phone/Mobile and through message about serious accident. Simultaneously it should also be informed to Safety Control, Railway Board and to be uploaded on SIMS website.

Reporting of Serious Accident by Central Control of Zonal Railway

Chief Controller / Central Control

Reporting of Serious Accident at Zonal Railways

The Chief Controller / Central Control shall in turn inform all concerned at Headquarters office including GM, PHODs etc. in the following order-

1. Principal Chief Safety Officer
2. Chief Medical Director (in case of passenger carrying train accidents)
3. Secretary to General Manager (for information to GM)
4. Additional General Manager
5. Principal Chief Operations Manager

6. Chief Passenger Transportation Manger
7. The other department controls Central Control. The respective departmental controls will in turn inform their PHODs, HODs and other officers/supervisors.
8. Chief Public Relations Officer
9. Deputy Chief Operations Manager (Coaching)
10. Deputy Chief Safety Officer- Traffic / Electrical / Mechanical / S&T/Engg.

25.9 Safety Officer of Zonal Railways

Reporting of Serious Accident by Zonal Railways to Railway Board (Reference of L.No. 2020/Safety (A&R)/19/9 dated 21.05.2020)

As per extant instructions, the Zonal Railways (PCSOs) should inform PED (Safety)/ ED (Safety)-II about Serious accidents immediately through Mobile/WhatsApp call/ message. The Dy. CSO should inform Safety Control through phone/ Mobile call/message about serious accident and simultaneously it should also be uploaded on SIMS website. The Zonal Railways should also update the Safety Control / ED (Safety)-II / PED (Safety) about relief, rescue and restoration work due to serious accidents on a regular basis till normalcy prevails.

25.10 Safety Directorate Railway Board

Reporting of Serious Accident at Railway Board

Principal Executive Director-Safety to inform concerned Members and CRB & MR Cell.

Media Briefing

Reporting of Serious Accident to Media

Media briefing shall be done only by-

1. Public Relations Officer of Division / Divisional Railway Manager / Additional Divisional Railway Manager / Branch Officer authorized by Divisional Railway Manager.
2. Media briefing by Chief Public Relations Officer / General Manager / Officers authorized by General Manager.
3. Media briefing by Additional Director General/Public Relations / Chairman Railway Board / Hon'ble Minister for Railways.

25.11 Role of on duty officials available at site in handling Serious Accident

On Duty Guard

Guard of The Train Involved in Accident: The duties are given in the sequence in which they must be performed. On occurrence of an accident to his train, the Guard of the train shall immediately:

- **a.** Protection of the train met with accident.
- **b.** If the accident has occurred on a double line section, the Guard should immediately check if the adjoining line is fouling or not. If it is fouling, he should immediately exhibit red flag by day and flashing light by night towards the direction in which train is expected on the adjoining line. He will continue to exhibit the hand danger signal until the time the adjoining line is protected as per rules in force.
- **c.** Quick survey of the site in order to access the causalities and injuries and decide the level of assistance required.
- **d.** Arrange to protect his train as per Rules in force, taking the assistance of any qualified staff, such as Assistant Guard, Assistant Loco Pilot, Gangmen, and Gatemen etc.
- **e.** Render first aid to any person injured, obtaining assistance of the railway staff, doctors and/ or volunteers on the train, or near the site of accident; and transport the injured to the hospital by taking the help of 104/108 Ambulance service.
- **f.** He will also arrange for preservation of clues and evidence until a senior Railway official takes over charge.
- **g.** Log activities and remain in general charge till a senior Railway Official takes over charge. There after work as per the instructions of the senior official-in-charge of the accident.
- **h.** Send information through quickest means to Control Office and SMs on either side of the block section for this purpose. Walkie-talkie communication provided with
  stations should immediately be used. Otherwise filed telephone should be used. If a train comes on the other line which is not

blocked the same should be stopped and information sent through the Loco Pilot. Assistant Loco Pilot or Asstt. Guard may be sent to the next station to convey information of the accident. If all of the above fail, one of the railway staff on duty on the train should be sent on foot to the nearest station.

i. Utilize Emergency Train Lighting box to facilitate medical aid.

On Duty Driver (Loco Pilot)

1. **Engine Crew of the Train (**Loco Pilot and Assistant Loco Pilot): On occurrence of an accident to a train, its crew shall:
   - **a.** Protect the adjacent line/lines/same line in accordance with rules in force.
   - **b.** Take such technical precautions as may be necessary or as prescribed by special instructions to render the locomotive safe.
   - **c.** Send Assistant Loco Pilot to assist the Guard in establishing contact with control office, relief and rescue operations.
   - **d.** Take necessary action to prevent Loco/Vehicles/Wagons from rolling down.
   - **e.** Make a quick survey of the magnitude of the accident and roughly assess casualty, damage and assistance required.
   - **f.** Send information through the quickest means to Control Office and SMs on either side of the block section. For this purpose,
     - **i.** Walkie-talkie communication provided with stations should immediately be used.
     - **ii.** Otherwise, Mobile Phone and field telephone should be used.
     - **iii.** If a train which comes on the other line is not blocked the same should be stopped and information sent through the Loco Pilot.
     - **iv.** Assistant Loco Pilot or Assistant guard may be sent to the next station to convey information of the accident.
     - **v.** If all of the above fails, one of the railway staff on duty on the train should be sent on foot to the nearest station. If necessary, detach Loco and take it to inform SM.

g. Render all possible assistance to the guard.

h. Preserve all clues and evidence regarding probable causes of the accident and ensure that these do not get disturbed.

i. Log your activities. Do not leave the spot unless you are relieved by a competent authority.

On Duty Ticket Checking Staff

Train Conductor / Superintendent / Travelling Ticket Examiner:

a) Ascertain if any Doctor is travelling by looking at the reservation chart and making verbal enquiries and arrange for First aid to the injured passengers.

b) Along with other TTEs in the train, he should assist the injured passengers to come out of their coaches. The TTEs should also help passengers trapped in the coaches to come out of the coaches.

c) Unclaimed luggage and other belongings should be handed over to the GRP with full details and acknowledgement obtained.

d) Prepare list of dead and injured. The list should be classified as under: DEAD, GRIEVOUSLY INJURED, SIMPLE INJURED. Details of the dead and injured should be obtained from the reservation chart, tickets held (to and from) or co-passengers. Assistance of the Police travelling in the train to be obtained also for identification.

e) The following details should be collected:

- **i.** Tickets of the Passengers travelling (to and from)
- **ii.** Ticket Numbers – Class
- **iii.** Coach Number and its position from the engine
- **iv.** Address of the passengers
- **v.** Nature of injury (Simple, Grievous)

f) He should keep records of the number of dead and injured (simple, grievous) if they are already transported by local people to the nearest hospital before the Railway Doctors had arrived.

g) Duties of IRCTC staff in case train run by IRCTC.

i. Preserve reservation charts of each coach containing names of passengers who actually traveled and in which

berth no.

ii. Render First Aid to injured.

iii. Take assistance of local people and other volunteers at site.

iv. Transport injured passengers by road vehicles, if available, to the nearest hospital.

v. Inform stranded passengers about alternative transport arrangement.

vi. Record evidence or statement volunteered by passengers/others at site.

On Duty Coach Attendant & AC Mechanic

Coach Attendant: Immediately after occurrence of a serious accident, the coach attendant should work under the guidance of Train Conductor/Train Superintendent.

AC mechanic:

a. He should immediately "Switch Off" the current where necessary to avoid short circuiting.

b. He should also assist Commercial staff i.e. Train conductor/ Train Superintendent/ TTEs in their duties at the accident site.

c. See that the emergency lights inside the Coaches are in working order.

On Duty Station Master

Station Master / Station Manager: Immediately after an accident or on receiving the report of an accident, the station superintendent/ Station Master and Assistant Station Master must:

a) ensure that no other train enters into the affected line/section from either direction/lock the commutator/handle of the Block Instrument controlling the affected section in "Train on Line" position wherever possible/ensure the signals giving entry to the line are kept at the "ON" position/ ensure putting of "Line Blocked" lever/slide collars on the concerned lever and/or slide/ensure that the points are set against the entry to the affected line and clamped wherever practicable;

b) Panel should be protected from any manipulation after an accident in station limit. Take action to protect the traffic and safeguard the property.

c) collect detailed information of the accident such as time of accident, nature and location of accident, casualties/injuries, obstruction, damages and assistance required and ensure that the adjacent line(s) is/are clear before allowing any movement on it/them.

d) inform, giving details of the accident and assistance required to the Control through the Control phone or any other available means of communications.

e) render first aid to the injured persons by taking the assistance of all Railway staff, Doctors and volunteers available on train or near the site of accident, if the accident takes place within the station limits.

f) arrange to send all available nearest medical assistance to the site of accident, in case the accident takes place in section and is attended with injury to any persons.

g) take all possible action to inform all concerned officials including civil and police.

h) see that the injured persons are shifted to hospital with the help of all available assistance, also see that the detailed particulars of the dead and injured are recorded.

i) arrange to remove the unaffected vehicles of the train, observing all relevant rules, to facilitate relief operation.

Note: If the accident is attributed to sabotage or suspected sabotage, nothing should be disturbed except for rescuing injured persons unless police clearance is received and on orders from the officer-in-charge at the site.

j) take all measures for the quick movement of ARME and /or ART to the site of accident and ensure that the caution order etc. are correctly issued to the Driver and Guard of all trains while allowing movement to the site of accident, clearly indicating the site of accident, the locations where the train

must come to stop and other restrictions to be observed.

k) see that water, tea and other requirements are supplied to the injured and stranded passengers within his resources.

l) remain on duty until replaced by a competent person.

m) report the accident to all concerned by the issue of accident message.

n) seize the Train Signal Register/logbook, Private Number book, Line Admission book and other relevant records are required, note the position of Block Instruments, signals, points indicators and levers etc.

o) Take the statements of staff where possible.

p) preserve all clues and arrange to protect the area with the help of police or RPF; q) ensure that all trains for transshipment of passengers are worked to the site of accident with the engine leading unless there are special reasons or specifically permitted otherwise by the officer-in-charge at the site of accident.

r) warn all passengers in advance in case of their transshipment at the site of accident.

s) ensure preservation of documents of damaged parcels, mail and goods etc.

t) ensure chronological recording of all information received or/and action taken in connection with the accident, in the station Diary.

On Duty Security Official

7) **I)First Response -** First Information about serious train accident or unusual incident involving loss of life, grievous injury, serious damage to Railway property etc., is normally received by the nearest RPF Post / Outpost. The person receiving such information should muster maximum available manpower within the shortest possible time and dispatch them to the scene of the accident by the quickest means. After dispatching the available manpower immediately, the Post / Outpost In charge should arrange additional man power. He should simultaneously pass

on the information to the senior supervisors, officers and the control rooms.

II) **RPF Official in charge of site** - The senior most RPF Officer available will assume Control and immediately start the following action

a) Segregate the area of incidence by establishing temporary barriers by use of nylon ropes (if available) or any other makeshift device available at the site to protect the area against the entry of spectators into the affected place.

b) Luggage of passengers should be isolated and protected and consigned goods are taken care of till they are handed over to claimants or taken over by the Railway.

c) RPF personnel should respond to any call for assistance to rescue victims and transport them to the nearest Hospital.

d) RPF Officers will maintain close liaison and harmony with the Officers of various departments of the Railways, GRP, Local Police and Officers of Civil Administration.

III) **Reinforcement:** Efforts will be made to get the reinforcement from the neighbouring posts / outposts, Reserve Line, Divisional Headquarters or Zonal Reserve. In case any RPSF battalion or Company is located in the vicinity, men can be requisitioned from there for dealing with such emergent situation till additional force is available from other sources.

IV) **Equipment**: While sending reinforcement, it should be ensured that the necessary equipment required for rescue, recovery and protection of the scene of incident are provided. Such equipment should include:

i) Torches and other lighting arrangements, if it is night time.
ii) Nylon ropes and poles for segregating the affected area from unwanted visitors and spectators.
iii) Loud hailer for making announcements.
iv) Stretchers and first aid equipments.
v) Wireless sets for inter communication.

vi) Cameras for photographing the scene.
vii) Video recording of rescue and salvage operations and connected administrative arrangements.

25.12 Traveling Railway Staff

Railway Staff traveling on the accident affected train:

Every Railway servant traveling by the affected train or available at the site, whether on duty or not, shall help in the disaster management by getting identified and rendering immediate assistance to the affected passengers at the site. Non-participation in accident relief operations will be considered as 'DERELICTION OF DUTY'. (Accident Manual of Zonal Railways)

a. Whenever a train is involved in a serious accident with casualties/injuries to passengers, all Railway staff traveling on the train either on duty or on leave is deemed to be on duty with immediate effect.
b. Under no circumstance should any of them leave the accident site unless and until divisional officers arrive, take over charge of rescue and relief operations, and permit them to leave.
c. Railway staff on train/at site shall volunteer themselves to render assistance and report to TS/TTE/Guard of the Train.
d. The senior most officers traveling on the train will assume charge as Officer-in- Charge Site (OC Site).

Trackmen/Gatemen working nearby

Engineering Gang Staff

a. On double/multiple line section stop any other train approaching the accident area by showing hand danger signal.
b. Ensure that track alignments or lines are not disturbed.
c. Report to Officer In charge at site and assist in rescue and relief work.
d. Assist in extricating injured passengers from coaches.
e. Assist in transporting them to nearest hospitals.

Gateman

- **a.** Keep gate closed if the train has not cleared the gate.
- **b.** On double/multiple line section stop any other train approaching the accident area by showing hand danger signal.
- **c.** Arrange to inform SM immediately.
- **d.** Don't meddle with Interlocking.
- **e.** Avail services of road vehicles waiting or passing through LC Gate.
- **f.** Send a message to a nearby village, informing them regarding the accident.
- **g.** Collect men and material available nearby and direct them to site.

25.13 Responsibilities of Officials at Divisional Control Office

Section Controller

Duties of Section Controller - Immediately when the Section Controller is informed of a serious accident in his section, he shall.

- **a)** ensure that adjacent line(s) in the affected section is/are free from obstruction before advising the concerned Station Masters to allow the Train to run over it/them.
- **b)** regulate train services in suitable places if required.
- **c)** see that the ARME/ART/Transship Train are worked out to and from the site of accident promptly and have a clear passage.
- **d)** keep a chronological record of all information received regarding the accident and action taken.
- **e)** obtain further details with regard to the extent of damage and progress in rescue operation and relief measures and co-ordinate with the officer-in-charge at the site.
- **f)** arrange to remove the unaffected vehicles, if any, adjacent to the affected vehicles to facilitate relief operation.

Note: Coaches with passengers if any should be drawn to a nearby station where catering/drinking water facilities are available, in consultation with the Sr. DOM/DOM.

Deputy Chief Controller

Duties of Deputy Chief Controller - Immediately after the Deputy Chief Controller is informed of a serious accident, he shall –

a) ensure the availability or engine for working out of ARME and/or ART.
b) ensure that the ARME/ART/Transship Train are moved to and from the site of accident on top priority.
c) keep a chronological record of details of accident, action taken, progress of rescue service and relief measures etc.

Chief Controller

Duties of the Chief Controller - Immediately on receipt of the information of a serious accident, he shall ensure that –

a) the Medical relief van and / or relief train etc. are moved promptly to the site of accident on Top priority duly ensuring the following target time for start of Accident Relief Train -

i. During day light hours (from 6 to 20 hours): 30 minutes
ii. During night hours (from 20 to 6 hours): 45 minutes

(Normally exit time of ARME to be 15 minutes for double exit and 30 minutes for single exit).

b) the emergency office is opened and manned in the Divisional Control office.

c) the regulation of traffic is done correctly, in consultation with Sr. DOM/DOM.

NOTE: Passenger carrying trains should be regulated at convenient stations, preferably where catering facilities, drinking water etc. are available.

e) timely information of all changes in train timings, diversion or cancellation of trains etc. is given to all stations on his Division as well as to the adjacent Divisions and/or Railway:

f) arrangements are made for the onward journey of passengers who are able to proceed; and

g) all assistance is extended to the officer-in-charge of the Divisional Control Office.

Officer-in-charge of Control Office

Duties of the Officer-in-charge of the Divisional Control Office - Unless otherwise arranged, the Senior Divisional Operations Manager or in his absence the Divisional Operations Manager shall take charge of the Control Office accident situation, who shall be assisted by Officer/Sr. Supervisors of all the concerned branches and shall have the authority to summon for such additional assistance as he deems necessary. He shall:

a) keep a close watch on the movement of ARME/ART which, meanwhile, have been ordered and arranged for, if required, movement of ARME/ART from adjoining Divisions/Railways.

b) make necessary arrangements for doctors and medical staff from nearby hospitals, medical units or stations to move promptly to the site of accident.

c) keep in close touch with the officer-in-charge at the site of accident to ascertain the position and particularly the assistance required at the site.

d) ensure that all concerned officials, including Civil and Police authorities, have been advised of the accident.

e) collect further information regarding the details of the accident, progress of rescue, relief and restoration operation and pass on the information to the Headquarters.

f) arrange for supply of food and drink to injured passengers as well as to other passengers of the affected train and also to the passengers on trains held up at the adjacent station(s) due to the accident.

g) arrange to open and man information centers for attending to the enquiries from the public at important stations including the station(s) where injured passengers are received and sent to hospitals:

h) maintain chronological record of all items of information received and action taken thereon.

i) arrange to obtain the list of persons killed and/or injured in the accident, display it at important stations for information of the public.

j) divert/cancel trains and also run duplicate/transship trains as the

circumstances may require.

k) arrange for transporting the stranded passengers from the site of accident to suitable place(s).

l) arrange for speedy ex-gratia payment as per extant rules.

Officer-in-charge of Transshipment

Duties of the Officer-in-charge of transshipment in case of serious accident. — The Sr. Divisional Commercial Manager or in his absence the Divisional/Assistant Commercial Manager will be in charge of arrangements for the transshipment of passengers and their luggage, parcels etc. at the site of accident. The official-in-charge of transshipment will be responsible –

a) to advise the passengers of the transshipment programme well in advance.

b) to select, in consultation with the Divisional Engineer or Assistant Engineer, the sites suitable for detraining and entraining passengers.

c) to see that the sites are demarcated and lighted at night, also that the routes over which the passenger may have to walk are clear.

d) to intimate the Station masters of adjacent stations through Control or in writing the exact kilometers of the site of train halt, so that these can be clearly indicated in the Caution Order to be issued to the Driver and Guard.

e) to arrange for supply of drinking water there:

f) to arrange for sufficient porters, gangmen, etc. from the nearest sources for the free carriage of passengers' luggage, parcel and Government Mail, etc.

g) to see that the site is provided with portable Telephone, installed and manned during transshipment work.

h) to ensure that each train for transshipment is accompanied by a responsible person, be piloted and correctly hand-signalled to stop at train halt.

i) to depute responsible persons to look after the transshipment work and general comfort of passengers and to record the details of the work in Logbook at site.

j) to ensure arrangement of Railway Security staff at the site of transshipment to safeguard the passengers and their luggage, especially at night.

Power Controller

Power Controller / Traction Loco Controller:

1) Immediately Arrange power and crew for Medical Relief Van and Accident Relief Train.

2) Ensure the Medical Relief van and Accident Relief Train are dispatched within the time prescribed.

3) Inform the Divisional Mechanical / Electrical Officers, headquarters PRC/TLC, CMPE(R&L)/CELE

4) Advise adjacent Division for MRV and ART if required.

5) Plan for additional powers and crews to assist in restoration.

6) Obtain biodata of running staff involved in accident and arrange for breathalyzer test and collection of blood samples at the earliest.

7) Co-ordinate with the Dy. Chief Controller so that the necessary locomotives, Loco Pilots, fitters and other technicians reach the site of accident promptly as required.

Traction Power Controller:

1) Ensure that the Electric Power Supply is cut off from the section if the overhead equipment is involved and / or where crane working has become necessary.

2) Ensure that all the necessary arrangements have been made for the dispatch of the Tower car, electrical staff and equipment required at the site of accident.

3) Co-ordinate with Divisional Electrical Engineer (Traction distribution), Dy. Chief Controller and Traction Supervisors concerned for restoration affected quick OHE.

Senior Divisional Operations Manager

1) Ensure that Medical Relief Van and Accident Relief Train leave within time and reach the site of the accident on top-priority.

2) Clear the unaffected coaches in the front and rear to the nearest convenient stations after transshipping the passengers from

affected coaches.

3) Plan for second MRV/ART for reaching the site from other end, if necessary, from adjoining Divisions/Railways.

4) Plan for trains for prompt transport of stranded passengers at the site and clearance of passengers held up at other stations.

5) Clear the stabled loads from the stations on either side of the site so that the lines are available for dealing MRV/ART/Coaching relief train/officers special/material train/tower-car/ light engines, etc.,

6) Mobilize sufficient number of Guards, TIs, SMs, Points man etc., and deploy at site and at the adjoining stations for organizing shunting and quick movement of MRV/ART/Coaching relief train/ Officers special/ Material trains/ Tower-car/ L.E, etc.,

7) Depute DOM/G or AOM to site to co-ordinate the movements and for relaying information about progress of relief/ restoration.

8) Plan for regulation of Passenger, Mail / Express trains, cancellation, diversion, termination short of destination in consultation with Headquarters such that the passengers can get catering facilities.

9) See that chronological log of all items of information and action taken connected directly or indirectly with accident is maintained properly.

10) Keep liaison with adjacent Divisions, Site and Headquarters.

11) Details of the dead, injured sustaining grievous or simple injury, their originating and destination station, ticket No. Hospitals to which sent for treatment and also particulars of next kith and kin to be obtained from the site and relayed to Emergency Control, Chief Safety Officer etc.

Other Divisional Officers

1) **Duties of Railway Officers of each Department in Divisional Head Quarters —** Immediately on receipt of information of a serious accident, all Railway Officers concerned must report at the Control Office or at the nominated place and take the

following action promptly.

a) decide, the Officers who will be deputed to take charge at the site and at the Divisional Control office.
   NOTE: Normally Sr. Divisional Safety Officer (Sr. DSO), Sr. Divisional Medical Officer (Sr. DMO), Sr. Divisional Mechanical Engineer (Sr. DME), Sr. Divisional Electrical Engineer (Sr. DEE/TRD), Sr. Divisional Engineer (Sr. DEN), Sr. Divisional Security Commissioner (Sr. DSC), ADRM / DRM move to the site for handling serious accident
b) arrange the quickest means for reaching the site of accident.
c) ensure that resources of all Departments, in men and material, are promptly made available for rendering assistance to passengers, in clearing the line and, if required, for transshipment of traffic.
d) make out a general plan of action for dealing with the accident and detailing the duties of officers of different Branches and other Officials.
e) ensure that all Civil authorities concerned, and other concerned officials have attended the site of accident.
f) ensure attendance of Doctor, ambulances and other available road vehicles in addition to ARME and/or Relief train and preparation being taken in rescue services.
g) see that the proper arrangement of staff and labour from each Department is made.
h) keep a close touch with the Officer-in-charge at the site of accident and different dealing centers and see that all assistance is provided and properly utilized in rescue service and in clearing the line at the earliest
i) keep a close touch with the Head Quarters, adjacent Divisions/Railways for advice and assistance
j) open and man enquiry counters at important stations of the division for the information of the public.

Duties of Transportation Inspector –

On receipt of information of a serious accident, the all concerned Inspectors shall –

1. Reach the site of the accident by the quickest available means.
2. Take general charge of the situation until the arrival of an officer.
3. Ensure the occupied and obstructed lines are protected as per the rules.
4. Make out a quick survey of casualties and injuries, ensure rendering of first aid to the injured, taking assistance of all available Railway Staff, Doctors and Volunteers on the train and near the site of accident.
5. Arrange to shift the injured persons to the nearest hospital with the help of available assistance, keeping their particulars as available and ask for further assistance if required.
6. Collect and record all important information relating to the accident, such as,
    1. the condition of the track, with special reference to alignment, gauge, cross-levels, super elevation, points of mount and drop, any sign of sabotage etc.
    2. the condition of rolling stock with special reference to brake-power and braking gear
    3. all marks on sleepers, rails, locomotives, and vehicles etc. especially for preservation of clues.
    4. position of derailed vehicles.
    5. position of Block Instruments.
    6. position of indications, keys levers etc. if the accident is within the station limits, in the section provided with signals etc.
    7. prima facie cause of accident.
7. Ensure that the Train Signal Register, Logbook, Private Number Book, Line Admission Book, speed Recorder Chart

and other relevant records are seized,

8. Obtain the statements of staff involved in the accident, as far as possible.
9. Prepare a rough sketch showing the position of derailed vehicles, position of track and OHE etc. make a quick survey of the extent of damage.
10. Remain at the site of accident for all possible assistance till relieved by another staff.

Duties of official-in-charge at the site-

The senior official present at the site when the accident occurred shall be in overall charge of the relief operation till he is relieved by another official deputed by the Administration to take over charge. However, the senior most official of the Mechanical Department shall be in-charge of the relief train. The senior most official present at the site of a serious accident, shall –

1. Take general charge of the situation and act to provide all possible assistance.
2. Depute Officers/Senior subordinates and all other staff or specific duties in –
    1. assisting the rescue operation, if any.
    2. assisting the preservation of clues.
    3. assisting the transshipment work, if any.
    4. taking action to remove the obstruction as soon as possible.
    5. ensuring the protection of adjacent line(s) and the affected train as per rules.
3. See that the portable telephone is installed and manned constantly by a responsible staff and ensure adequate lighting of the accident area at night.
4. See that the injured persons, if any, are rendered first aid and shifted promptly for medical aid.
5. ensure to get clearance from Police authorities in case of suspected sabotage.
6. make an immediate assessment of the following, with the help of

the available doctors and /or others.

1. the number of persons killed, and of those sustaining grievous, simple, and trivial injury.
2. extent of damage.
3. the period of suspension of traffic.
4. assistance required.
5. prima facie cause of accident.

7. See that a dealing center is opened at the site of accident and manned –

1. to keep the details of persons killed, injured, and action taken in each case.
2. to relay the above information in detail to the Divisional Headquarters:
3. to attend to public enquiries and
4. to relay the progress of relief work:

8. Ensure recording of all information at the dealing center concerning the accident and the relief operations in the form of an accident Logbook.

9. See that immediate action is taken to protect and safeguard property.

10. See that proper assistance is given to the injured, ladies, children and the aged.

11. Arrange for transporting the stranded passengers, preferably to stations where drinking water, catering arrangements etc. are available, unless they can be sent to their destinations:

12. See that the arrangement is made for preservation and proper care of dead bodies, if any, till further disposal.

13. See that obstruction is cleared in the minimum possible time, and every action taken for this purpose.

14. Arrange, in case of an accident occurring at a station, for speedy ex-gratia payment as per extent rules.

25.14 Safety

Senior Divisional Safety Officer:

1. Proceed to the site of accident by first available means.
2. Ensure protection of affected line(s) and adjacent line(s) has been done as per rules or not.
3. Check proper arrangement is made in rescue and / or relief operation.
4. Take all action for preservation of clues.
5. See that assistance, to the extent necessary, is called from all sources.
6. Ensure collection of detailed particulars of the accident.
7. Arrangement of videography of the site
8. Record statement of Guard and Loco pilot and subject them to breathalyzer test and liaison with medical department to collect blood sample**.**
9. Ensure joint measurements etc., are taken in prescribed Proforma. Recover the speedometer chart, data logger statement etc.,
10. Ensure evidence of train staff, station staff and public are taken on the spot. Addresses of passengers who are willing to give statements later should also be obtained.
11. If the accident took place within the station section, he should arrange to record the knob position on the panels, block instruments position, etc., and seize the relevant station records.
12. Produce public witnesses and advise Superintendent of Police and District Magistrate in time, issue press notification in local press when advised by Chief Safety Officer, in case of CRS enquiry.

25.15 Medical

Duties of Medical Officer & Staff: The nearest Railway Medical Officer, on receipt of the report of a serious accident with injury to person, shall –

1. Reach the site of accident with the Medical Relief Train or by the quickest available means, with all men and material commensurate with the seriousness of the accident, assess and advise further medical assistance necessary.

2. Obtaining and transmitting the details of persons involved in the accident to the Divisional Control Office and in case of an accident to a passenger-carrying train, reportedly attended with casualties and/or grievous injuries, unless otherwise advised by the Divisional Railway Manager, must proceed to the site of the accident by the first available means.
3. One doctor should be deputed to collect blood samples of crew of train.
4. render medical aid to the injured carefully as far as possible at site.
5. make timely and adequate arrangements for shifting the injured persons to suitable hospitals as considered necessary for further treatment.
6. keep detailed particulars of the dead and injured e.g. their name, address etc. as far as available.
7. deal with the dead and injured as per extant rules and instruction.
8. Co-coordinating with Civil/Military/State/Public medical authorities and private practitioners for the purpose of (a) above.
9. Proper follow up to be done daily for all injured patients admitted in different hospitals for the first two weeks alternate day on third week and then weekly and by weekly. Progress reports to be prepared till all the patients are discharged from the hospitals.
10. All the bills of non-railway hospitals including private hospitals to be settled in consultation with the Commercial department, Personnel department at divisional level as per extant Rules.

25.16 Commercial

Duties of Commercial Officer at site -

1) The Sr. Divisional Commercial Manager or in his absence the Divisional/Assistant Commercial Manager, on receipt of information of a serious accident, shall proceed to the site of accident by first means.
2) Ensure that drinking water, tea and snacks are promptly supplied to stranded and injured passengers. Keep the record of the number of passengers served with tea and snacks.

3) Take charge of the custody of luggage of the injured persons.
4) Luggage of the dead passengers shall be deposited with the Railway Police after roper records and acknowledgement.
5) Issue advice to the next kith and kin of the injured and dead and also furnish details to Sr. DOM in Control Office.
6) Arrange for enough Ticket Collectors, Porters and Vendors for assistance of stranded passengers.
7) Arrange for ex-gratia payment to the injured and the next kith and kin of the dead.
8) Arrange for refunds to the passengers.
9) Assist the stranded passengers during transshipment with enough Porters and TCs.
10) Arrange to open an enquiry office at the site to reply to the queries regarding disposal of the injured and dead.
11) Make inventory of the parcels damaged and advise the CCO/SC.
12) Arrange for buses for stranded passengers and keep record of the buses arranged destination-wise with the number of passengers.
13) Ensure the making over of the dead bodies to the Police for disposal.
14) Assist the Railway Doctors with Ticket Collectors / Porters. He should compile the figures of injured and dead from all sources. (i.e. Police, TTE / SM).
15) Issue advice to the Control Office / Stations for issue of free passes to the next of kin of the dead and injured.
16) Keep in touch with the progress of patients in hospital and increase the ex-gratia payment suitably in case simple injuries turn into grievous or patients paid ex-gratia payments for grievous injuries die later in the hospital.

25.17 Mechanical

Senior Divisional Mechanical Engineer:

1) Proceed to the site. After site survey, make out a plan of action for quick rescue of injured and trapped passengers. Accordingly call for the equipment, manpower required.
2) Supervise rescue operation.

3) Ensure that Speedo meters record, engine logbooks etc., are seized / sealed.
4) Correctly forecast to control as to the sequence of movements required to site.
5) Record the details regarding brake power and other aspects of Rolling stock as per prescribed Proforma.
6) Have the joint measurements of the rolling stock taken.
7) Check the fitness of the stock supposed to move from the site.
8) Note down observations; plan to record joint measurements if loco is involved in accident. If it is not possible for all types of measurements to be taken on the spot, then these should be taken in the shed. All relevant records should be sealed in the shed.

Mechanical / Breakdown Staff:

1) Proceed to the site of accident. Assist in evacuating passengers, if any, trapped in coaches involved in accident.
2) Record the details regarding brake power and other aspects of the rolling stock as per prescribed pro-forma.
3) Take measurements of the Rolling stock as per the prescribed Proforma / procedure.
4) Check the fitness of the stocks which are supposed to move from the accident site and certify their fitness.
5) Ensure that locos / coaches / wagons re-railed are in a fit condition to be taken from the accident site.
6) Plan for efficient movement of Breakdown Special, engine, tower wagon etc., between site and station for quicker restoration.
7) Ensure that the log / diary regarding restoration at the accident site is maintained properly.
8) Ensure that video cassette of the serious accidents is prepared in systematic and continuous manner specifically showing the position of coaches, engine under gears of coaches and engines, rails, tracks etc. and the clues which may in turn provide some information to the enquiry authority. Similarly, still photographs should also be taken

in a judicious manner.

25.18 Electrical

Senior Divisional Electrical Engineer:

A) Ensure proper lighting arrangements are provided at the site.

B) In case of fire in coaches, arrange to immediately collect / record evidence of passengers.

C) Examine the coach to ascertain the cause and damage.

Senior Divisional Electrical Engineer (Traction Distribution)

1) Arrange for adequate number of OHE breakdown staff, tower wagon and proceed to the site of accident by the quickest available means.

2) Depute Officer / Supervisor in control office.

3) Ensure that OHE is made dead, and OHE is slewed as required.

4) Arrange and supervise restoration of OHE, expeditiously.

5) Record all relevant information concerning the accident.

Senior Divisional Electrical Engineer (Traction Operation / Traction Rolling Stock):

1) Where EMU or Electric Locomotive is involved, call the relief train, if required with adequate number of breakdown staff and proceed to the site by quickest available means.

2) Depute officer in the Control Office.

3) Note down joint observation regarding the loco / EMU.

4) Ensure that measurements of the loco / EMU are taken on the spot wherever possible otherwise in Car / Loco Shed.

5) Ensure that speed

Electrical Staff: Power (General): Ensure lighting arrangements, if required, are provided at the site. In case of Fire in coaches, immediately collect / record evidence of passengers with full particulars. If some passengers are willing to give evidence later on, their names and addresses should also be recorded.

1. **Over-Head Equipment**
   a) In case of an accident, where OHE is involved, arrange for adequate number of break-down staff / tower wagon and proceed to the site of the accident by the quickest available means.
   b) Ensure the OHE is made dead, and OHE is slewed as required for ground / crane operations.
   c) Arrange and supervise restoration of OHE expeditiously.
2. **Loco Inspector:**
   a) Proceed to site in case Electric/Diesel Loco or EMU is involved.
   b) Supervise restoration operations.
   c) Ensure that Speedo graphs, Speedometer chart, Loco / EMU logbooks are seized, sealed and kept in safe custody.
   d) Note down his observations regarding the Electric / Diesel Loco / EMU and record measurements as per the prescribed pro-forma.
   e) Ensure that measurements of the Loco / EMU are taken on the spot. If it is not possible for all types of measurements to be taken on the spot, the same should be taken in the shed.

25.19 Engineering

Senior Divisional Engineer (Civil):

1) Proceed to the site.
2) Ensure joint measurements are taken and sketches of the accident site are accurately drawn out.
3) Ensure collection of adequate labour, material and equipment and their proper deployment for speedy restoration.
4) Depute one DEN / AEN in Control Office for planning, reinforcement of labour, material and staff and movement of material train.
5) Ensure that inspection notes and diary of AEN, S.E/J.E (P.WAY)

gang charts, maintenance records etc., are seized and secured.

6) Assist other departments in clearance of line and ensure that track is rendered fit and certified at the earliest.

Engineering Staff:

1) All Engineering officials shall report to the senior most Officer at site or take charge if he happens to be the senior most. The staff who are not on duty or travelling by train shall assist in rescue and relief operations.

2) Render assistance to give medical relief / treatment to injured passengers. Make available all transport facilities to the injured passengers and assist in rescue of trapped passengers.

3) Arrange divers with diving equipment for underwater rescue.

4) Safeguard and preserve clues till Police or RPF personnel arrive at site and take charge. Collect evidence in the form of track readings and rolling stock measurements.

5) Ensure water supply at adjoining stations and arrange for supply at accident site.

6) Cutting equipment available from the Section Engineers (P. Way) and Section Engineer (Bridges) and workshops to be moved to the site to supplement the ones available in the B.D. special.

7) Assist other departments in establishing communications and power supply at site, including hiring Diesel generator sets for augmenting the power supply arrangements.

8) Assist in transshipment of passengers and their luggage.

9) Provide tents and other temporary shelter at site for protection against elements of weather.

10) Ensure the track is restored for traffic at the earliest.

25.20 Signal and Telecommunication

Senior Divisional Signal and Telecommunication Engineer:

1) Proceed to site of accident. Make arrangements for installing, Mobile/Railway/ BSNL/ Satellite phones at site in sufficient

numbers so that communication from site to control office/divisional office/Zonal office/ other stations, outside agencies takes place smoothly and without delay.

2) Establish communication between the site and Divisional Head Quarters Office.

3) Ensure that a detailed record is made of all evidence bearing on the accident so far as S&T and interlocking are concerned.

4) Preserve clues and seal the relevant equipment if required.

5) Restore the signaling and interlocking for normal working without delay.

Signal and Telecommunication Staff:

1) Proceed to site by quickest means available.

2) Ensure portable telephone / emergency telephone set is provided at site.

3) Wherever feasible, wireless sets to be installed at the accident site for communication with Divisional Headquarters and if possible, with Railway Headquarters. Walkie- talkie sets / Megaphones / loud hailers to be deployed as necessary.

4) DOT/BSNL telephone with STD facility to be arranged at the temporary enquiry offices opened at site and nearest location wherever possible.

5) Render such assistance as required by Guard in attending to the accident victims and stranded passengers.

6) Seal Block instruments, Relay rooms and note positions of levers, knobs, slides indications etc., as the case may.

7) Arrange for early restoration of signaling and telecom equipment as soon as such restoration is permitted.

25.21 Security

Senior Divisional Security Commissioner (Sr. DSC) / RPF:

On receipt of information about serious accident, Sr. DSC will take following actions -

1) Post adequate number of RPF at site of accident and at any other place where assistance from his department may be

required.

2) Proceed to the site by the quickest available means.
3) Liaise with the local police at site.
4) Coordination with state fire department in case of fire accidents and arrangements for collection samples by FSL.
5) Ensure security of passenger's belongings, parcels, damaged goods, parcel van etc.

Divisional Railway Manager

In the event of a serious accident, the Divisional Railway Manager shall –

1. depute an officer to the site of the accident to assume overall charge unless he himself proceeds to the site of the accident.
2. ensure that assistance is rendered by each Branch of his Division promptly and efficiently in rescue and relief, transshipment of traffic if required, and for removal of obstruction at the earliest; allot specific duties to the individual Officers for dealing with the accident.
3. keep in close touch with the Officer-in-charge at the site of accident and Officer-in- charge at the Control office and see that all assistance is provided and properly utilized in rescue and relief and for removal of the obstruction.
4. Ensure that Telephonic and / or Telegraphic advice of the accident is sent to the concerned officials.
5. Arrange a preliminary enquiry in cases where immediate investigation of certain matters is considered necessary even though the enquiry may be conducted later by the Commissioner of Railway Safety etc.
6. Proceed to the site of the accident as and when required under extent instructions.
7. He will brief the Media himself or authorize PRO for briefing.

Principal Chief Operations Manager

He will monitor the rescue and relief operation, regulation of the trains, diversion of trains, starting new trains for transshipping the stranded passengers, movement of cranes/ART/ARME etc. He will also guide the Divisional Officers for restoration and regulation of traffic.

Principal Chief Commercial Manager

He will monitor the rescue and relief operation, ex-gratia payment to the kith and kins of accident victims, arrangement for transshipment of stranded passengers, catering arrangement at the site, coordination with the Civil authorities for treatment of injured passengers etc. He will also guide the Divisional Commercial Officers to handle serious accidents efficiently.

General Manager

He will monitor the rescue and relief operation, ex-gratia payments, movement of ART/ARME, movement of special trains for stranded passengers, establishment and functioning of Control room at site/ Divisional Office to disseminate correct information about the accident to the public. He will also update the CRB & CEO, Railway Board regarding handling of serious accidents. He will brief the Media himself or authorize CPRO for briefing.

Members of Railway Board

They will monitor and guide the Zonal Railway Officers of their respective departments in the efficient handling of serious accidents. They may also visit the accident site, if required to supervise the relief and rescue operation.

Chairman & CEO Railway Board

He will brief the Hon'ble MR about the accident, relief and rescue operation, payment of ex-gratia etc. He may visit the site, if required to supervise the relief and rescue operation. He will brief the Media himself or authorize ADG/PR for briefing.

Hon'ble Minister of State for Railways (MOSR)

Hon'ble MOSR will monitor the relief and rescue operation at the site and apprise Hon'ble MR. He may also announce any special items of relief, enhanced ex-gratia etc. as approved by Hon'ble MR. He may also visit the accident site, if required to assess the adequacy of relief and rescue operation.

Hon'ble Minister of Railways (MR)

Hon'ble MR will monitor the relief and rescue operation at the site and apprise PMO, MHA and other Ministries if required. He will also make a statement in parliament, if required. He may brief Media or authorize CRB & CEO or ADG/PR for briefing. He may also announce any special items of relief, enhanced ex-gratia etc. He may also visit the accident site, if required to assess the adequacy of relief and rescue operation.

MEDICAL AID AT THE TIME OF RAILWAY ACCIDENTS

26

26.1 Medical Aid at the Time of Railway Accidents

General Policy:-

(1) The general policy in the case of Railway accidents in which casualties occur is that of rapid evacuation after rendering immediate and necessary first aid treatment. This is always preferable to prolonged detention and elaborate treatment at the site of accident as the time factor is of paramount importance in removing the injured persons to the nearest hospitals by the first available means of transport to enable all necessary medical aid to be rendered.

(2) It is, therefore, essential that the Railway doctors know thoroughly their duties not only when called upon to render medical aid to the injured but also in connection with the preparations made by the Railway administration to deal with accidents and the maintenance and use of accident relief medical equipment.

(Ministry of Railway's letter No. 383.T.G/dt. 31/3/1951)

26.2 Types of Accident Relief Medical Equipment

With a view to provide prompt medical aid, the following types of accident relief medical equipment are provided on the Railways.

(1) **Scale I -** in medical vehicles, as part of accident relief trains. Contents as per Annexure I

(2) **POMKA (Portable Medical Kit for Accidents)-** in all health units, polyclinics and sub divisional, divisional and zonal hospitals, (Annexure II)

(3) **Scale II-** in boxes, at specified stations.(Annexure III)

(4) **First aid** boxes in all stations dealing with passenger traffic, workshops, marshalling yards, loco sheds, and C&W depots, and in breakdown vans of accident relief trains and guards (Annexure IV)

(No. 87/H/7/12 dt. 15/09/1989 and dt .02/08/1995)

(5) **Special first aid boxes –** provided in all long distance superfast, Shatabdi and Rajdhani trains (Annexure V)

(Bd.'s letter 85/H/7/9 dt. 30.6.95)

(6) First aid box for gangmen- (Annexure VI)

Apart from the equipment referred to above, every Railway doctor should be provided with an emergency medical bag in which he can carry the injectables, pain relieving drugs and other medicines and dressings required in emergency. If a Railway doctor happens to be on the spot of an accident, he can start relief work without waiting for the regular medical equipment to arrive.

(Para 1414 of Indian Railway Establishment Manual and Min. Of Railways letter No.69/H/2/6 dt. 16/8/71 and Rly Bd.'s letter No.87/H/7/12 dated 15/09/89)

26.3 Policy regarding provision of different types of Accident Relief Medical Equipment

(1) Accident Relief Medical Equipment Scale I in Medical vehicles forms a unit of the accident relief train and is stationed at divisional headquarters and at other selected important stations preferably where there are hospitals or health units in charge of Railway medical officers. The function of the vehicle is to carry

medical equipment to the site of accident so that prompt medical aid could be rendered and injured persons transported expeditiously to the nearest hospitals.

(2) An auxiliary van is also provided along with the medical vehicle and stabled in the same siding with both ends open. The auxiliary van should have provision for emergency tools for extricating passengers from debris and should also carry adequate supply of drinking water and provision for tea, coffee and light refreshment to be served to affected passengers.

(3) As far as possible, items of medical equipment likely to be required immediately for opening a temporary field dressing station should be kept in portable containers which should be numbered, each container having a printed card attached to it in the front giving the details of the contents.

(4) The medical vehicle should be stabled in a siding having opened at both ends. Although the responsibility of placing of medical vehicle in a suitable position for taking it out quickly rests with the operating and mechanical departments, yet it is the duty of medical department also to keep an eye on the position in which medical van is stabled. If it is stabled in any manner likely to cause delay in its movement in an emergency, it should at once be brought to the notice of official in charge for necessary action.

(5) The medical portion of the Accident Relief Train i.e. the medical vehicle should be stabled separately or so marshalled on the relief train that it can, if necessary, be despatched in advance of the rest of the rake without any delay.

(6) In despatching an Accident Relief Train to the site of accident site, any factors likely to reduce the speed, such as the presence of a crane on the train, should be taken into account in deciding as to whether the medical vehicle should be sent in advance.

Note: All medical vehicles should be so built as there is no speed restriction when they are despatched to the site of accident. Further the train examiner should ensure that all

bearings etc. of these vehicles are in good working condition.

Portable Medical Kit for Accident (POMKA)

(7) Contents of POMKA as per annexure II should be stored in a convenient suitcase (Size 21 inches) for easy transport by road / rail. There should be one set of POMKA in Health units & polyclinics and two sets in sub- divisional hospitals. The divisional/ zonal hospitals are required to have three sets of POMKA with some additional items as per annexure II to this chapter.

Scale II - Equipment

(8) Accident relief medical equipment Scale II is located at selected stations where there is no Accident Relief Train. They should be located at every 80 to 100 km. apart, and preferably where there is a Railway hospital or a health unit. Generally, there should be at least one scale II equipment stationed on either side of a scale 'I' equipment so that in case of major accidents, at least one or the other can reach and be available at the site of accidents in quick time.

(9) The equipment which now consist of 3 sets of POMKA and additional item as per Annexure III should be in charge of the Station Manager/Dy. S.S and should be stored in portable boxes of suitable size and standard pattern as approved by the Chief Medical Director, on a raised concrete platform so that it's bottom does not touch the floor, in a separate room in or adjacent to the station building. If necessary, a room should be specially constructed for the purpose. It should have separate entry and exit one on either side, and it should be so situated as to facilitate easy loading of the boxes in train. For quick transporting, loading and unloading of the boxes containing scale II equipment, a wheelbarrow with handle should also be provided.

(10) This equipment is intended for use in major accidents only and

is to be handled by any doctor or by qualified first-aiders under the supervision of the doctors. It should not be normally utilised for minor accidents.

Special First Aid Boxes

(11) (a) The special first aid boxes with contents as per the list at Annexure V should be provided in all the long distance, super-fast, Shatabdi and Rajdhani Trains. The tablets and injectables provided in these boxes will be used by any qualified allopathic doctor who may be travelling in the train. Other first aid material provided, including tablet paracetamol (for Headache/Fever) can be used by a first aid trained person.

(b) These boxes will be under the charge of the Train Superintendents in the trains, who will be responsible for getting these boxes replenished from the hospitals/health units.

(c) In the trains where train Superintendents are not posted/available, such boxes will be given in the charge of departmental Pantry Car Managers who, likewise, will be responsible to get them replenished from the hospitals.

(d) The boxes with Trains Superintendents/Pantry Car Managers in the above-mentioned trains will be in addition to those provided to Guards.

(e) The additional boxes and items required for the purpose may be supplied from the Railway hospitals and no additional budgetary sanctions on this account will be provided. The size of these special boxes will be 46 cms in length, 30 cms in width, and 13 cms height and should be metallic one only. The requisite number of the boxes on each Railways may be assessed as per the number of rakes of such trains, keeping in mind an additional cushion for replacements/additional future provisions in more trains. CMDs on the Railways will arrange to process procurement

of these boxes through the Controller of Stores.

(Railway Board's letter No. 95/H/7/9 dated 30.06.95)

First aid boxes

(12) Static first aid boxes in breakdown vans of accident relief trains, and at stations, workshops, yards, loco sheds and carriage and wagon depots etc., should be hung in a prominent place on a wall bracket in the respective offices. These boxes should be made of metal, preferably aluminium, with the lid fitting well down over the sides as to be dust proof and should have a handle or a canvas strap arrangement for ease of carrying. The exact size and pattern of the boxes should be standardised by the Chief Medical Director.

(13) The first aid boxes for guards of passenger carrying trains should be of the standards as fixed by the St. John Ambulance Association of India and the contents should be as detailed in Annexure IV. These boxes should be the personal equipment of the guards and should be carried by them in their guard-boxes.

(14) The first aid box of guards of suburban trains may be compact and smaller in size. They should have canvas strap arrangement so as to be carried on the shoulder.

(15) The equipment in first aid boxes in the workshops may differ from the standard first aid boxes to comply with the rules prescribed by the respective state Govts. under the Factories Act, in case they are different from those laid down by the Ministry of Railways.

(16) First Aid box for gangmen shall be an aluminium or metallic box, which is not likely to be rusted. It should be sturdy. Wooden boxes wherever used may be retained till they are fit for use. Their replacement should be by aluminium boxes only.

(17) The equipment contained in the first aid boxes is only for first

aid and is to be used by those qualified in first aid. Even though no first aid box has been provided for the guards of the goods trains, the guards and drivers of such trains are expected to be trained in first aid, so that, life saving measures like stopping of haemorrhage and transport of case with fractured limbs can be undertaken at site.

(Para 1415 and 1416 of Indian Railway Establishment manual and Ministry of Railways' letters No.62/142/118/M(C) dt. 12/10/1962,No 66/M(M&P) 7/2 dt. 4/09/1967 and 27/07/1968,No.69/H/2/6 dt. 16/08/1971,dt. 3/12/1971 and dt. 22/12/1972)

26.4 Maintenance of keys

Scale I Equipment

(1) The keys of the locks of the various external doors of the medical vehicle will be in duplicate, one set to be in charge of the Junior Engineer (Loco) or the Station Master and the other with the medical officer in charge of the station where the vehicle is located. The keys in both the cases should be suitably marked for identification, and will be kept in a glass fronted case, duly sealed by the station master or the medical officer in charge of the station where the vehicle is located, as the case may be, and is to be fixed in a prominent place in their respective offices.

(2) The keys of any locks inside the vehicle should also be in duplicate, one set in a glass fronted case fixed inside the vehicle duly sealed by the doctor in charge, and the other set will be kept in his custody in a sealed glass fronted case and fixed in a prominent place in hospital or the health unit of the section.

Scale 'II' Equipment

(3) The boxes of scale II equipment will not be provided with locks and keys but will be kept sealed by the medical officer in charge of the section. The entire scale II equipment will be kept in separate boxes in a room in or adjacent to the station building, which will be locked and provided with duplicate

keys, one of which will be with the stationmaster on duty and the other with the medical officer in charge. The keys in both cases should be suitably marked for identification, and will be kept in glass fronted cases, duly sealed by the station master or the medical officer, as the case may be, and fixed in a prominent place in their respective offices.

POMKA

(4) One key should be attached to the handle of the box and the other kept sealed in box in the room where the POMKA is kept.

First Aid Boxes

(5) The keys of First aid boxes for use at static locations such as stations, marshalling yards, workshops, loco sheds, carriage and wagon depots, etc., will be kept in charge of the local supervisors on duty.

(6) The first aid boxes with guards of trains carrying passengers will have no keys.

(7) Special first aid boxes should be sealed. If locked, the keys should be available either with the Train Supt. or the Pantry Car Manager, as the case may be.

26.5 The details of accident relief medical equipment

(1) The details of the contents of the accident relief medical equipment Scale 'I', Scale 'II', POMKA and first aid boxes are indicated in Annexure I to VI to this chapter, respectively. A synopsis is given in Annexure VII to this chapter.

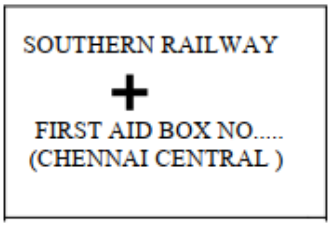
(2) Inside the Medical vehicle or the room, as the case may be, printed list showing the full details of all the scale 'I' and Scale 'II' equipment will be affixed in a prominent place in a glass fronted case.

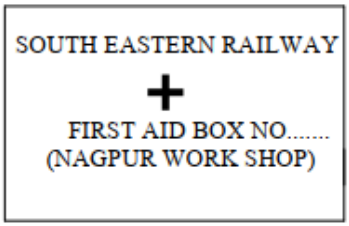
(3) A printed list showing the full details of all scale 'I' equipment will be displayed in a glass case fixed in a prominent place inside the vehicle. A printed list of the contents of each of the

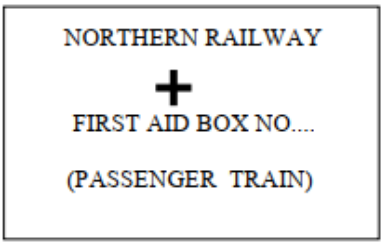
boxes, almirahs, cupboards, cabinets, or shelves will be displayed outside of these, to indicate their contents.

(4) The outside of each of these boxes of scale II equipment should be painted with a number and broad classification of contents as indicated against the list in Annexure III. A printed list of the contents of each of the boxes will be affixed to the inside of the lid of the boxes to indicate the contents.

(5) The outside of each of the first aid boxes at stations, marshalling yards, workshops, loco sheds, carriage and wagon depots and with the guards shall be painted with a number, sign of red cross on white background, the words "first aid box", name of station, workshop, etc., as indicated below:







(6) A printed list of all contents of the first aid boxes will be affixed to the inside of the lid of the boxes.

(Ministry of Railway's letter No.69/H/2/6 dt. 16/8/1971, No.71/H/2/11 dt. 18/12/1971, No. 69/H/2/6 dt. 10/01/1977 and No.79/H/7/10 dt. 11/09/1979 and 08/11/1979)

26.6 Custody, replenishment and inspection of the accident relief medical equipment

(1) The medical officer in charge of the section is responsible for ensuring that the contents of the accident relief medical equipment Scale 'I' and Scale 'II' are as prescribed and are in good order. After use, the equipment should be inspected by the medical officer in charge of the section and replenishment of all the consumed articles arranged immediately.

(2) Where Scale 'II' equipment is stored in the station building, the station master is responsible for the safe custody of the boxes. Whenever this equipment is sent to the site of accident and the contents used by Railway/non-Railway doctor, the responsibility for returning the unused equipment back to the station from where it was taken rests with the station master of the station where the equipment was sent, and the Railway doctor in whose jurisdiction the equipment is located will, on return of the equipment, check the same and arrange immediately for necessary replenishment of the articles used.

(3) As regards to First aid boxes, in all big Railway stations, the contents should be replaced and refilled from the Station superintendent. These boxes should not be sent to the health units /Hospitals for refilling. In small stations, these may be sent to the Health Units for refilling.

(Rly Bd.'s letter No 87/H/7/12 dated 15/09/89)

(4) The medical officer in charge of the section should inspect all accident relief medical equipment in his section and submit periodical inspection reports to his immediate superiors.

(5) A complete stock taking of all equipment in the A.R.M.E should be done every year. A certificate to the effect that this has been done and that the equipment are according to the scales laid down should be submitted by the medical officer in charge of the section so as to reach the Medical Officer in charge of

Division by the end of November and to the Chief Medical Director by the end of December. To enable this to be checked, the date of replacement should be clearly shown on the packages so replaced.

(6) A.R.M.E Scale 'I' and auxiliary van must be inspected monthly by the following officials (preferably jointly):-
   (a) Medical officer
   (b) Station master/Dy. Station superintendent/Station Manager.
   (c) Junior Engineer (Telecommunication).
   (d) Junior Engineer (Train Examining), and
   (e) Electrical official in charge.

(7) The train examiner must personally ensure that the coaches are in good working order on the mechanical side and then certify their fitness. The electrical official must personally examine and similarly ensure and certify that the electrical portion of the auxiliary coaches and the electrical equipment in the main coach are in good working order.

(8) The A.D.M.O/D.M.O/Sr. DMO must check the medical equipment and shall be responsible for the immediate replacement of articles found unserviceable or deficient.

(9) The train-examining official should ensure that the water tanks are drained and refilled with fresh water once in a month.

(10) The telecommunication official must thoroughly test the portable telephone to ensure that this is in working order and that the wire diagram is up to date. He must also check the public address equipment wherever provided.

(11) After each monthly inspection, a report should be submitted by the medical officer in charge to the C.M.S./M.S. in charge of the division stating that joint inspection has been carried out and bring to the notice of C.M.S/M.S any defects noticed that require remedial action. He will also bring to the notice of

C.M.S/M.S in charge if the vehicle has not been inspected by any of the official mentioned above to enable the Medical Officer in charge to take action at the divisional level.

(12) Scale II equipment will be inspected by the ADMO/DMO/SR.DMO and the stationmaster once in a month.

(13) The C.M.S/M.S must inspect the A.R.M.E scale I once in six months and scale II once in a year and take such action as found necessary to see the equipment is up to the standard and in good working order. It is desirable that the inspection of scale I equipment is done jointly with Sr. DME, Sr. DEE and Sr. DSTE During the inspection, complete stock verification should be done.

(14) In addition to the monthly inspection, to ensure that all bearings etc., are in good condition, the train examining official must arrange for the coaches to be taken out on a trial run once in a quarter to the nearest junction where they may be detached and brought back. This must be arranged by the J.E/train examination and the Station Master, in conjunction with the control and in consultation with the medical officer in charge, so that all concerned are aware of the position of the vehicle. The date of such trial runs and results thereof should be entered in the inspection book. To ensure that all staff required to attend in case of accidents are alert and are conversant with what they are expected to do at the time of accident, accident drill should be conducted once every three months, if there is no real accident within that quarter.

(15) Other medical and executive officers would also make surprise checks of all accident relief medical equipment including the first aid boxes in running trains. Endorsement of inspection of first aid boxes should be given in the notebook provided in those boxes. After inspection, all seals broken by the inspecting officer would be replaced.

(16) A notice board should be displayed outside the office where the first aid box is kept, showing that there is a first aid post with Red Cross markings for information of staff and travelling public.

Note:-

(i) Staff should be properly trained and conversant with the methods of putting up shelters.

(ii) Items of accident relief medical equipment that are expended during the accident should be recouped immediately.

(iii) Surgical instruments that are not made of stainless steel should be kept smeared lightly with Vaseline. Once a year Vaseline should be wiped off, the instrument cleaned with rag soaked in kerosene and fresh Vaseline applied.

(iv) There are many items, which are to be kept in sterile drums so that they will be available ready for immediate use. The Medical officer in charge of the division can decide the number of drums required. The drums should be of uniform size of 23-cm diameter and 23 cm height so that they can be sterilised in the single drum autoclaves normally available at almost all health units. These items should be re-sterilised every month and the date of last sterilisation indicated.

(v) All perishable items as well as injectables and medicines should be replaced every year, sometime during September/October. i.e., when the monsoons are over. Items like adrenaline and glucose should be replaced even earlier if they show signs of deterioration, like brown discolouration or deposits in injections of adrenaline and fungus growth, haziness or deposits in bottles and ampoules of glucose solution.

(vi) Bottles containing spirituous preparations like surgical spirit, tincture iodine, etc., should be sealed with candle wax to make them airtight.

(vii) Plasma, A.T.S., Tetanus toxoid, Anti gas gangrene serum, etc. and any other equipment as well as additional quantities of equipment like blankets, stretchers, dressing materials etc., which are likely to be needed at the site of accident may be taken from the hospital and health units, in addition to the standard Accident Relief Medical Equipment.

(viii) Stretchers should be opened out and canvas tested by standing on it for deterioration once in three months. Blankets should be taken out of their boxes and examined once in six months. Umbrellas to be regularly tested by opening them.

(ix) Insecticides and /or moth repellents like naphthalene balls, di-chloro benzene etc., should be used to prevent damage to blankets, etc.

(x) Petromax lanterns and Primus stoves should be lit and tested once a quarter.

(xi) Rubber goods should be powdered with french chalk. Hot water bags and ice caps should be kept lightly inflated. All rubber goods should be replaced from fresh hospital stock once a year, including rubber tourniquets when required.

(xii) Transfusion fluids in A.R.M.E should be kept in disposable polythene containers.

(xiii) Torch cells should normally be kept outside the torch. The plastic cover on torch cells should be removed. These should be replaced once in six months or earlier if they show signs of deterioration. The torches should be tested at each inspection. All medical officers have full powers for replacement of any items that become due or any deficiencies that occur on attending an accident.

(xiv) Articles of medical comfort such as tea, coffee, milk powder and sugar, etc., should be replaced once a year or earlier if they show signs of deterioration in stock.

(xv) All items of equipment which are periodically replaced may be consumed in Railway hospitals and health units if otherwise fit for consumption.

(xvi) All other items that are found to have deteriorated or become unserviceable on each inspection should be replaced.

(xvii) Availability of vials for collection of blood samples for alcohol content should be ensured.

(xviii) O2 cylinder should be tested regularly for availability of oxygen.

(xix) ARME should be regularly cleaned, and all electrical connections should be on and only the mains should be 'off'

(xx) The ward of the ARME should have a door opening towards the track.

(Para 1429 of Indian Railway Establishment Manual and Ministry of Railway's letters No.1/M & H/13/75 dt. 2nd and 3rd November.1961, No.69/H/2/6 of 16/8/1971 and No.77/H/9 dt. 30/06/1977 and Bd.'s letter No. 87/H/7/12 dated 2.8.95)

26.7 Maintenance of list of medical institutions and private practitioners etc., of the neighbourhood

(1) Station masters/Dy. SS should maintain a list of all Railway and non-railway medical institutions, private practitioners and first-aiders available in the neighbourhood in the proforma as given in Annexure VIII -XI to this chapter. These lists should be exhibited in a conspicuous place in the office of the stationmaster at each station and also paste them in ARMEs for the guidance of all concerned. The stationmaster should make certain that these lists are kept up to date. The medical officer in charge of the section should periodically inspect the same to see that these are properly maintained and kept up to date.

(2) The medical officer in charge of the section should also maintain the list as given in Annexure X and XI to this chapter. These lists should be hung in a conspicuous place in his office/consulting room and kept

up to date.

(3) All medical officers should make themselves acquainted beforehand with the capacity of the facilities available at all non-railway hospitals and dispensaries in their jurisdiction and try to establish personal relationship with the officials concerned.

(4) Formalities if any, to be observed before a person could be admitted in a non-railway medical institution for treatment, should also be completed with the concerned authorities beforehand and not kept pending till an accident actually takes place.

(MOR's letter No.MH59/MES/19/medical dt. 31/01/1959 and No. MH 59/MES/96/Medical dt. 25/09/1959and A.C slip no 7 of 2002 Bd's no 2002/H/23/4 dt 31-12-2002)

26.8 Display of detailed road maps

In case where the site of accident is approachable by road, medical aid may be rushed more quickly and more conveniently by road than by train. A detailed road map for each division should therefore be obtained and kept framed in all Railway control offices. Copies of these should also be available in all Railway hospitals, so that in case of need road ambulance vans can be rushed to the site directly from the Railway hospitals. The road ambulance vans should be kept in proper working condition so that they are fit to undertake long journeys. (MOR's letter No.64/H/2/1 dt. 13/01/1964)

26.9 Classification of Injuries

(1) For the purpose of these rules, a Railway employee or a passenger or a trespasser shall be considered to be 'injured' only when he/she is incapacitated from following customary vocation for more than forty-eight hours. Such injuries are classified as under -

  (i) 'Serious '(include 'grievous' injuries as defined below)

  (ii) 'Minor' or 'Simple' but excluding 'trivial' injuries such as abrasions or bruises.

(2) The following are considered to be grievous injuries(as per section 320 of the Indian Penal Code) -

  (a) Emasculation.

  (b) Permanent privation of the sight of either eye.

(c) Permanent privation of the hearing of either ear.
(d) Privation of any member or joint.
(e) Destruction or permanent impairment of powers of any member or joint.
(f) Permanent disfigurement of head or face.
(g) Fracture or dislocation of a bone or tooth.
(h) Any hurt which endangers life, or which causes the sufferer to be, during the space of twenty days, in severe bodily pain or unable to follow his ordinary pursuits.

(3) Injuries other than those defined above are considered to be minor or simple injuries.

(4) Apart from the 'injured ' cases as above, there may be cases where a passenger or trespasser receives only petty abrasions or bruises. These are of trivial nature and technically speaking should not be taken as 'injured ' persons.

Note:- Change of classification of injuries may be necessary in the light of x-rays and other detailed findings after admission. Advice with regard to change of classification of injuries should be furnished to the Chief Medical Director as early as possible.

(Paragraph 1428 of Indian Railway Establishment Manual, Ministry of Railway's letter No. 68/safety/43/19 dt. 25/02/1969 and section 320 of the Indian Penal Code).

26.10 Duties of the staff at the time of an accident

(1) The most suitable responsible Railway official on whom is to devolve the responsibility of summoning the nearest available medical aid according to the urgency of the case is the Station Master. When the Station Master on duty receives information that there has been a serious accident in his jurisdiction and the services of the medical department are necessary, he should immediately take action to send the accident relief medical equipment to the site of accident by the first available means of transport. If the equipment is being sent by the relief train, and the medical officer does not arrive before the train is ready to start, the equipment should be sent with the train in charge of a responsible person, preferably one holding a first aid certificate. This medical equipment will be placed at the disposal of any

available medical man on the spot.

(2) The medical officers will keep themselves in readiness for such an emergency. Immediately on receiving notice that a serious accident has occurred for which the services of the medical department are required, the medical officer in charge of the section himself, if time permits, or a responsible official deputed by him, will take the following steps:-

(i) Notify his superiors.

(ii) Notify the Matron/Sister on duty (where there is a hospital and nursing staff).

(iii) Ask all concerned authorities to co-operate with the medical department and to allow first aid men belonging to their departments to render first aid and assist in the transport of the injured from the point of accident to the non-railway /Railway hospital.

(iv) Call for assistance from the neighbouring divisions and neighbouring Railway also, if the nature and the magnitude of the accident warrant it.

(v) Inform the local non-railway hospitals about the occurrence of the accident so that they should remain in readiness to receive and treat the injured.

(vi) Instruct the nearest St. John Ambulance Brigade to send with equipment as many Brigade personnel as possible.

(vii) Detail one medical officer if he can be spared or a senior dispenser to remain on duty for seeing that all arrangements are made at the hospital at the receiving end for the reception of the injured, that transport is in readiness, that all first aid men available are informed of the accident, etc.

(viii) Proceed to the site of the accident by the first available means of transport, along with the necessary staff and medical equipment.

(ix) Advice any medical personnel enroute to accompany him.

Note:-

(a) If the medical officer in charge of the section is not available at the time of receipt of the information of the accident, the official next in charge should take the initiative and proceed to the site of the accident with all the available equipment and the staff at his disposal and by the first available means of transport.

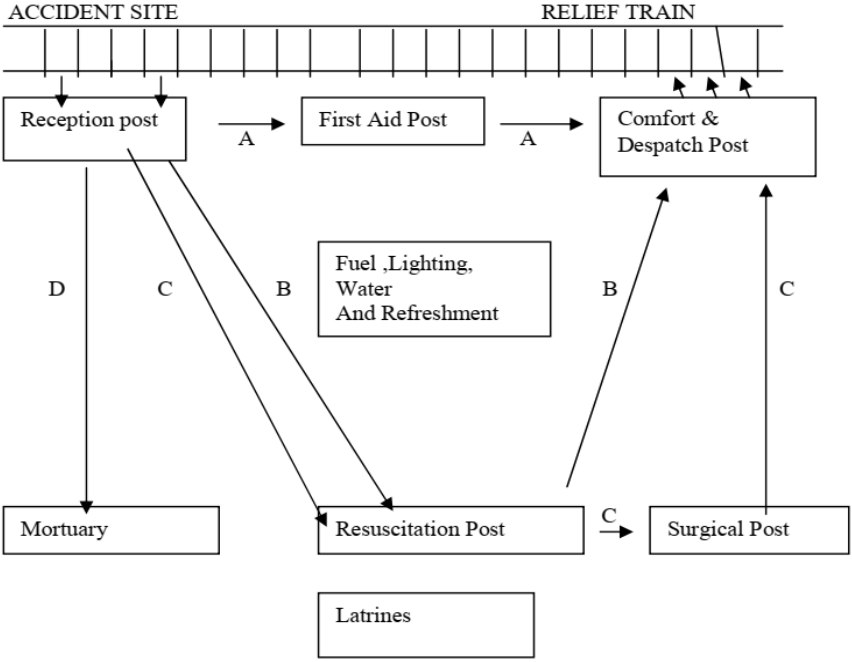
(b) In an accident case, the question of jurisdiction does not arise. It is the duty of every Railway doctor to respond to the call, whenever required, irrespective of the jurisdiction.

(c) In large stations, where there are number of doctors, details of duties to be carried out by each in case of an accident may be laid down.

(para 1416 and 1417 of Indian Railway Establishment Manual)

26.11 Medical aid at the site of accident

(1) In major Railway accidents where the number of casualties is expected to be large, it may be worthwhile to establish one or more temporary field dressing stations at the site of accident, in bivouac shelters as per the sketch given below for guidance:



A: Minor Casualties, **B:** Cases of Shock, **C:** Cases of Grievous Injuries, **D:** Death

(2) When the accident has occurred near a station, the medical officer

in charge may also make use of any building belonging to Railway which might be suitable for setting up of temporary field dressing station, for example, refreshment room or waiting room.

(3) The temporary field dressing station should consist of the following posts:-
   (a) Reception post,
   (b) First aid post,
   (c) Fuel, lighting, water, and refreshment post,
   (d) Resuscitation post,
   (e) Surgical post,
   (f) Comfort and dispatch post,
   (g) Mortuary,
   (h) Latrines.

(4) The Railway doctor in charge should detail the staff available to take over the necessary equipment from the accident relief medical vehicle and the boxes etc., give instructions to open them and keep everything in readiness to receive and deal with the casualties.

(5) The work of different posts should be regulated as follows:-
   (a) **Reception post:-** All the casualties including the dead should be brought to this post directly from the site of accident for sorting and dispatch to other posts. Minor casualties should be directed to the first aid post and after necessary first aid treatment should be sent directly to the comfort and dispatch post for disposal. Serious casualties should be directed to the resuscitation post and/or surgical post, as the case may be, for treatment. The dead, after examination should be sent to the Mortuary. It is advisable that such cases be examined again after ten minutes before finally coming to the conclusion of their being dead or not.
   (b) **First aid post:-** Here all minor casualties should be rendered first aid and then sent directly to the despatch post for disposal.
   (c) Fuel, lighting water and refreshment post:- Here all necessary arrangements should be made for providing light and supply of boiling water and refreshments, etc., for the use of other posts.
   (d) **Resuscitation post:-** The casualties are treated here. The post

must be as quiet and sheltered as possible. Relief of pain and distress, correction of dehydration, restoration of blood volume and administration of oxygen etc., may be carried out where necessary.

(e) **Surgical post:-** Casualties requiring urgent surgical aid must be given treatment at this post and then taken to the despatch post. No elaborate surgical treatment should be undertaken, but spot amputation of crushed and hanging limbs may be done.

(f) **Comfort and despatch post:-** Casualties should be provided necessary comfort in the form of rest and refreshment while awaiting despatch. Here the patient's name, address and ticket/pass No. etc., should also be noted. If the patient wishes to proceed home or to his destination, he should be allowed to do so, after taking down the particulars about him. Serious casualties should be transported to the nearest hospitals without delay by the first available means of transport.

(g) **Mortuary:-** All dead, after examination and confirmation, should be brought to Mortuary covered with shrouds, and handed over to police for identification and disposal.

(h) **Latrines:-** At least two latrines- one for male and one for female- should be provided at convenient and accessible sites. Necessary number of sweepers and bhisties may be obtained from the nearest Health Inspector.

(6) All the injured persons should be dealt with in a systematic manner. Elaborate surgical methods need not be undertaken on the spot. The aim should be to provide first aid with the least possible delay, and special attention should be paid to the treatment of shock, arrest of haemorrhage, splinting of fractures etc., where necessary. Arrangements should thereafter be made to evacuate the seriously injured to the nearest hospital as expeditiously as possible. To the extent found feasible, evacuation of such cases to a hospital should be in the direction that the injured person was proceeding.

(7) The injured persons other than Railway beneficiaries should be shifted, as far as possible, to the nearest non-railway hospital except in the following circumstances:

(i) Non availability of non-railway hospital.
(ii) Want of accommodation in the non-railway hospital.
(iii) Unsuitability of non-Railway hospital to render first aid.
(iv) Difficulty of transport.
(v) Serious condition of the patient.
(vi) In other circumstances considered justifiable by the attending medical officer.

(8) The injured persons other than Railway beneficiaries, when admitted in a Railway hospital should be transferred to non-railway hospital as and when their condition permits.

(9) During evacuation of the injured persons to a hospital by train, stretcher/lying case should preferably be accommodated in medical vehicles and suitable alternate accommodation in the train may be utilised for the others.

(10) An attendant, male or female as needed, should travel in each compartment and a sweeper with a bedpan and a urinal should be available.

(11) Medical assistance enroute from other Railway hospitals/health units should be arranged.

(12) A ticket giving particulars, as far as possible, of name, father's/husband's name, address, ticket / pass No. and brief notes of injuries and first aid rendered, should be tied round the neck of all serious cases evacuated to hospitals. The hospitals to which the injured are being evacuated should be advised by quickest means regarding number and sex of the injured that are being sent to them.

(13) The Chief Medical Director must be informed immediately of any serious accident, which has involved loss of life or injury to persons. The list of the injured with a description of their major injuries must be issued with the least possible delay. The Chief Medical Director should be kept informed of the exact position regarding the names and number of persons injured or dead, nature of casualties and the time of evacuation of the injured persons to hospital. If the cases admitted are in a hospital in the section, a daily report must be sent of their progress in the first week, and at such intervals as asked for subsequently.

(14) The senior doctor in charge should be the last person to leave the site of accident after ascertaining that no case has been missed. He should arrange to get particulars of all the injured cases including those attended by non-railway doctors and the names and addresses of such doctors for settling claims, if any, and for issuing letters of appreciation by the Chief Medical Director or the General Manager later.

(15) At stations where Railway hospital is provided, the senior doctor left behind would make the following arrangements:-

(i) He should get as many beds emptied in the male, female, and children's wards as possible by discharging non-serious cases.

(ii) Adequate arrangements for blood transfusion should be made, operation theatre should be kept ready, and ambulance should be despatched to the station to bring the casualties.

(iii) Ambulances should be requisitioned from the Municipalities, Red Cross centres, and civil and military hospitals where necessary.

(iv) All local hospitals, whether civil or military, should be advised to be prepared to receive casualties, giving them an approximate idea of the number of such casualties they should expect.

(16) In order that these instructions are carried out correctly and expeditiously, it is essential that every member of the Medical staff should be conversant with his duties and should know the contents and use of various types of medical equipment to be handled by them at the time of accident. When a permanent Railway employee proceeds on transfer or leave, the attention of the relieving employee should be drawn by the relieved employee to these instructions and to his individual duties. All hospital staff should be conversant with the erection of bivouac shelters.

(17) The doctor in charge should arrange periodical rehearsals to ensure that the staff concerned are able to carry out the above instructions.

(18) Railway Medical Officers providing medical aid at the site of accident should use doctor’s aprons with arm Red Cross badges of

minimum 6 " wide . All other personnel rendering medical Aid at the accident site should wear arm badges.

(paras 1418 to 1426 of the Indian Railway Establishment Manual and Bd.'s letter No 82/H/7/3 dt. 05/06/82, B6/safety- I/24/47 dt.15.5.89 and dt 08-06-1989)

Note:- If an accident has occurred elsewhere and the injured are given attention in transit enroute, their full particulars without disturbing the dressing should be noted and sent to the medical officer in charge of the section.

26.12 Referring of the injured persons to private hospitals

(1) It will be the duty of the train or station staff to render first aid to a person injured within the Railway premises immediately. If necessary, arrangements should be made to summon medical aid from other Railway or non-railway sources.

(2) In the following special cases, the injured person may be taken to a private hospital:-

(a) When there is no railway or non-railway hospital available within a radius of, say eight kilometres of the site of accident, or

(b) When the attending doctor certifies, in writing, in the prescribed proforma as given in Annexure XII to this chapter, that the treatment in private hospital is necessary in the interest of the patient.

(3) Where a private hospital, to which an injured person is taken in terms of (a) and (b) above has different scales of charges for different kinds of accommodation/diet, he should normally be limited to the lowest class of accommodation/diet available. It will be left to the discretion of the doctor in charge, depending on the severity of the injury, to admit the injured person to a higher class of accommodation/diet, if it is considered essential for the recovery, or for prevention of serious deterioration of the condition of the injured person.

(4) Where the aforesaid conditions are not satisfied but the injured person, or any adult member of his family who happens to be along with him, desires him to be provided with a higher class

of accommodation/diet, there would be no objection to this being done, provided the injured person or the adult member of the family agrees, in writing, to pay the extra cost involved directly to the hospital authorities.

(5) For this purpose, each of the Railway administrations should come with a working arrangement with such private hospitals as may be necessary in the areas served by them so that in an emergency, injury cases can be referred without loss of time to the hospitals concerned. To facilitate matters and to avoid misunderstandings, the Chief Medical Director should draw up a list of such private hospitals, bearing in mind the Railway or non-Railway hospitals in existence in the vicinity. The Chief Medical Director should also settle the charges to be paid to the hospitals for such cases for each class of accommodation/diet etc.

(6) The bills by such private hospitals should be submitted through the Chief Medical Director who will certify the correctness of the charges payable, before passing for payment by the FA&CAO. Payments to private hospitals under this para can be arranged locally by the Railways and the Ministry of Railways approval is not necessary.

(Para 1421 of Indian Railway Establishment Manual and M.O.R's letter No.MH 59/MES/96/ Medical dt.18/12/1959)

26.13 Recording of information

(1) As on these occasions, the medical staff are fully engaged in dealing with the casualty cases, a responsible official should be detailed by the Divisional Railway Manager to take notes, regarding details of the injured as mentioned and as dictated by the doctor.

(i) Name.
(ii) Full address.
(iii) Ticket/Pass No. with full particulars of journey.
(iv) Two marks of identification.

(v) Details of injuries.
(vi) existing deformities and old scars.

(2) Only rough notes are to be recorded at the site of accident, based on which detailed reports are to be made out later as laid down in para 714.

Note:- The official detailed by the D.R.M. will also make arrangements for refreshments and food, and to collect names and addresses of relatives of the injured passengers to be informed.

(3) The attending doctor should also make a note in respect of following, as the information may be useful at an official inquiry:-

(i) Time and mode of receipt of first information of accident.
(ii) Time of occurrence of the accident.
(iii) Time of his departure from his station for the site of accident.
(iv) Transport used.
(v) Details of the staff who accompanied, and medical equipment taken or ordered to be despatched to the site of accident.
(vi) Time of his arrival at the site of accident.
(vii) Copies of all messages, including telephonic and telegraphic messages to his immediate superior or any other person.

Note:- No statement with regard to number or nature of casualties should be given to members of public or press till all casualties have been reconciled and after ensuring that not a single case has escaped attention. These reconciled and final figures should only be given to press or general public by the senior most Railway official on the spot, viz.., Divisional Railway Manager, Chief Medical Superintendent or other divisional officers as the case may be.

26.14 Submission of reports

(1) On return to headquarters, a detailed report should be made out based on rough notes recorded vide para 713, which should give the name and addresses of all persons injured, with details of injuries, and should state how each case has been disposed off.

The detailed report should also give particulars of the cases attended by the non-railway doctors and the name and addresses of such doctors. The report should be submitted to the Chief Medical Director along with the injury reports on accident block forms for passengers and railway employees separately.

(2) These notes should be kept confidential as these form important documents for assessing compensation. (Para 1427 of Indian Railway Establishment Manual)

26.15 Issue of complimentary passes to the next of kin

Complimentary passes may be issued to the next of kin of the victims of accident from any station in India to the site of accident and back to the destination, as well as to surviving victims, who are discharged from the hospitals to their destinations, provided that:-

(i) the issue of such passes should be centralised in the General Manager's office and should have the personal approval of the General Manger.

(ii) the class of pass for the surviving victims should be the same as they were travelling, or higher if recommended by the attending doctor,

(iii) the class of pass for the relatives should be determined according to their status,

(iv) such passes should be issued to not more than two relatives of the injured or the deceased persons and,

(v) no break journeys are allowed.

(M.O.R's letter No. E (G) 58-5-6/1 dt. 23/25/08/1958)

THE LIABILITY FOR RAILWAY ACCIDENTS AND EX-GRATIA PAYMENT (Railway Boards letter no. 2023/TC-III/49/l/Ex-gratia dated 18.09.2023.)

27

The Indian Railways is run by Government of India. Since Government of India is a welfare State thus, it always concerns with people of India specially during public distress. When any accident happens, the Indian Railway pay some amount as immediate relief to the sufferer as an initial compensation. However, the compensation is not the mandatory but still paid to the people as goodwill measure.

27.1 The liability of Railway Administration in Train Accident

The liability of the railway administration in the event of a consequential train accident attended with casualties has been defined in Section 124 of the Railways Act, 1989 as under: -

> "When in the course of working a railway, an accident occurs, being either a collision between trains of which one is a train carrying passengers or the derailment of or other accident to a train or any part of a train carrying passengers, then whether or not there has been any wrongful act, neglect or default on the part of the railway administration such as would entitle a passenger who has been injured or has

> suffered a loss to maintain an action and recover damages in respect thereof, the railway administration shall, notwithstanding anything contained in any other law, be liable to pay compensation to such extent as may be prescribed and to that extent only for loss occasioned by the death of a passenger dying as a result of such accident, and for personal injury and loss, destruction, damage or deterioration of goods owned by the passenger and accompanying him in his compartment or on the train, sustained as a result of such accident".

With effect from 1.8.1994 under Section 124-A of the Railways Act, 1989, the railway administration has also become liable to pay compensation for loss of life or injury to bonafide rail passengers who become victims of untoward incidents such as terrorist acts, violent attack, robbery, dacoity, rioting, shoot-out or arson by any person in or on any train carrying passengers, waiting hall, cloak room, reservation or booking office, platform, any place within the precincts of a railway station or the accidental falling of any passenger from a train carrying passengers. Section 124-A of the Railways Act, 1989 reads as under: -

> "When in the course of working a railway an untoward incident occurs, then whether or not there has been any wrongful act, neglect or default on the part of the railway administration such as would entitle a passenger who has been injured or the dependent of a passenger who has been killed to maintain an action and recover damages in respect thereof, the railway administration shall, notwithstanding anything contained in any other law, be liable to pay compensation to such extent as may be prescribed, and to that extent only for loss occasioned by the death of, or injury to, a passenger as a result of such untoward incident:

Provided that no compensation shall be payable under this section by the railway administration if the passenger dies or suffers injury due to: -

(a) suicide or attempted suicide by him.
(b) self-inflicted injury.
(c) his own criminal act.
(d) any act committed by him in a state of intoxication or insanity.
(e) any natural cause or disease or medical or surgical treatment unless such treatment becomes necessary due to injury caused by the said untoward incident."

Explanation:

For the purpose of this section, "passenger" includes

(i) a railway servant on duty; and
(ii) a person who has purchased a valid ticket for travelling by train carrying passengers, on any date or a valid platform ticket and becomes a victim of an untoward incident.

27.2 The Quantum of Compensation

Payment of compensation is governed by the Railway Accidents and Untoward Incidents (Compensation) Amendment Rules, 1997. Under these Rules, the amount of compensation payable in case of death is Rs.4 lakhs. For injuries, the amount varies from Rs.32,000/- to Rs.4,00,000/- depending on the nature of injury sustained.

Ex-gratia relief is given by the Railway Administration soon after an accident at the rate of Rs.15,000/- to the next of the kin of the deceased. In case of grievous injury, the ex-gratia is paid at the rate of Rs.5,000/- for up to 30 days of hospitalization. If the injured victims require indoor treatment for more than 30 days, additional ex-gratia is paid at the rate of Rs.1,000/- per week or part thereof for further six months, and if further indoor treatment is required, additional payment of Rs.500/- per week or part thereof is made for another period of six months. Ex-gratia in case of simple injury is Rs.500/-. The ex-gratia relief is intended to meet the immediate expenses and is not taken into account at the time of final

settlement of compensation claims. In case of serious or special circumstances, the quantum of ex-gratia can be enhanced.

Application for Compensation

Under Section 125 of the Railways Act, 1989, it has been provided:

(1) "An application for compensation under Section 124 or 124-A may be made to the Railway Claims Tribunal-
   (a) by the person who has sustained the injury or suffered any loss, or
   (b) by any agent duly authorized by such person in his behalf, or
   (c) where such person is a minor, by his guardian, or
   (d) where death has resulted from the accident, or untoward incident by any dependent of the deceased or where such a dependent is a minor, by his guardian.

(2) Every application by a dependent for compensation under this section shall be for the benefit of every other dependent."

The application for compensation will be decided by Railway Claims Tribunal. 21 benches of the Tribunal have been set up at different parts of the country and they are functioning from 08.11.1989.

Applicant can now file claims at Railway Claims Tribunal as under:

1. Having jurisdiction over the place of residence of the applicant, or
2. The place where the passenger purchases his ticket, or
3. Where the accident or untoward incident occurs, or
4. Where the place of destination station lies, as against only at the place of occurrence of accident earlier.

27.3 Interim Relief by Railway Administration

Under section 126 of Railways Act, 1989, it has been provided that if a person who has made an application for compensation under section 125, desires to be paid interim relief, he may apply to the railway administration for payment of interim relief along with a copy of the application made under that section.

27.4 Liability for accidents at Level Crossings

No liability accrues in the case of collisions between trains and road vehicles at unmanned level crossings in which railway passengers are not involved and cases of persons run over by trains.

However, the victims or their dependants can claim compensation under Law of Torts by moving Motor Vehicle Accident Tribunals and the compensation is paid if any contributory negligence is proved on the part of railway administration. The Tribunal decides the quantum of compensation on merits of each case. The amount of ex-gratia paid is counted towards amount of compensation awarded by a Court of Law. However, Supreme Court of India in a judgment arising out of Civil Appeal No. 3033 of 1990 (Union of India v/s United Insurance Co. Ltd and Others) ruled that the driver and owner of the bus and the railways can all be joint tortfeasors, if proved.

As regards accidents occurring at manned level crossings, prima facie due to the negligence of railway staff, ex-gratia payment is made to the victims by the railway as per the rate decided time-to-time by Ministry of Railway.

27.5 Ex-Gratia Payment

The meaning of Ex-Gratia in Latin is **"by virtue of grace" or "by favour".** Therefore, an ex-gratia payment is voluntary because the paying party doesn't need to compensate the receiver. Ex gratia meaning is a payment made from virtue to individuals by an organization or government for claims and damages. Ex gratia payment definition has undergone several changes. The general ex gratia payment definition is a type of payment made by an organization, government, etc., to an individual for claims and damages without acknowledging any legal obligations. Generally, ex gratia payments are requested to fulfil such damages that do not come under any insurance policies.

Ex gratia payment has a moral obligation. To maintain a good relationship with its customers, the Indian Railway pay the ex-gratia to the passenger involved in Railway Accident and other untoward incidences. The rate of ex-gratia keeps changing over the time and requirement due to financial inflation and other reasons.

27.6 Features of Ex-Gratia Payment

1. Ex gratia meaning is that it is out of choice and cannot be forced.

2. Companies provide ex-gratia payment to maintain their good public image.
3. Ex gratia meaning is free of any obligation and admission of liability.
4. Ex gratia payment is a gesture of goodwill.
5. Ex Gratia payment is also termed the "Golden Handshake".
6. Ex gratia payment is under the employer's will and does not fall under any legal obligation.
7. There's no limit on ex gratia payment amount, which entirely depends on the paying party.
8. Ex gratia payment is never fixed and varies from one organization to another.
9. Ex Gratia payments do not fall under EPFA and are not considered wages.

27.7 Amount of Ex-gratia for Train Accidents, Untoward Incidents and Manned Level Crossing Gate Accidents

	Type of accident	Amount of ex-gratia for Death	Amount of ex-gratia for Grievous Injury	Amount of ex-gratia for Simple Injury
1)	**Train Accident** (as defined under Section 124 of the Railways Act, 1989)	Rs. 5,00,000/- (Rupees Five lakh only)	Rs. 2,50,000/- (Rupees Two lakh Fifty thousand only)	Rs. 50,000/- (Rupees Fifty Thousand only)
2)	**Untoward Incident** (as defined under Section 124-A of the Railways Act, 1989)	Rs. 1,50,000/- (Rupees One lakh Fifty Thousand only)	Rs. 50,000/- (Rupees Fifty Thousand only)	Rs. 5,000/- (Rupees Five Thousand only)
3)	**Accident at Manned Level Crossing** due to Railway's prima facie lability)	Rs. 5,00,000/- (Rupees Five lakh only)	Rs. 2,50,000/- (Rupees Two lakh Fifty thousand only)	Rs. 50,000/- (Rupees Fifty Thousand only)

27.8 Additional Ex-gratia relief in case of Hospitalization of Grievously Injured Passengers beyond 30 days

In case of Train Accident	In case of Untoward Incident
Rs. 3,000/- per day to be released at the end of every 10-day period or date of discharge, whichever is earlier.	Rs. 1,500/- per day to be released at the end of every 10-day period or date of discharge, whichever is earlier **up to further six months of hospitalization.**
	Thereafter, Rs. 750/- per day be released at the end of every 10-day period or date of discharge, whichever is earlier **up to further five months of hospitalization.**
(a) Lump sum amount of ex-gratia for hospitalization of grievously injured passenger up to first 30 days is as mentioned in table at para (1) above. (b) The maximum period for which ex-gratia is payable to the grievously injured passenger will be 12 months.	

1. This ex-gratia relief will be exclusively for passengers who are grievously injured in train accidents or untoward incidents as defined under Section 123, read with Section 124/124-A, of the Railways Act, 1989.
2. The period for treatment as indoor patient for more than 30 days would need to be certified by a Railway Doctor for the purpose of further ex-gratia payment up to the period of remaining 11 months. In case where the injured are taking treatment in other than Railway hospital, the treatment must be certified by Railway Doctor.
3. Sr. Divisional Medical Officers shall also keep track of such injured people taking treatment in other than Railway hospitals. Sr. DCM/DCM shall keep coordination with Sr. DMO for the purpose and arrange payment of ex-gratia as per the prescribed schedule mentioned in the table in Para-2 above at the doorstep of injured person. Every care shall be taken by Sr. DCM/DCM to avoid any inconvenience to injured person in such cases.

27.9 Mode of Payment of ex-gratia/enhanced ex-gratia

1. Maximum amount of up to Rs. 50,000/- to be paid in cash as an immediate relief for taking care of initial expenses.
2. Remaining amount to be paid by Account Payee Cheque/RTGS/NEFT/Any other online payment mode.
3. Notwithstanding anything contained in Para 32.5.1 and 32.5.2 above, Railways may disburse the entire amount of ex-gratia/enhanced ex-gratia by Account Payee Cheque/RTGS/NEFT/Any other online

payment mode, if deemed appropriate.

27.10 Other terms and conditions

1. No ex-gratia relief would be admissible to road users in case of accident at Unmanned Level Crossing, trespassers, persons electrocuted by OHE (Over Head Equipment).
2. Ex-gratia payment in case of train accidents and untoward incidents are not to be considered at the time of final claim for compensation.
3. The amount of ex-gratia relief admissible to road users, who meet with an accident due to **Railway's prima facie liability** at Manned Level Crossing Gate Accident, will be counted towards the amount of compensation payable, if action is tenable against the Railways under the Law of Torts and an award is granted by a Court of Law.
4. Ex-gratia payments should also be made to railway servants killed or injured by a moving train while performing their duty, for example, gangman working on track run over accidentally by a moving train.
5. Payments should be sanctioned/arranged preferably on the spot by a Senior Scale Officer nominated by the General Manager after making such enquiries as can be reasonably made on the spot after the immediate needs by way of medical attendance etc. to injured persons are attended to.

Circulated by Railway Boards letter no. 2023/TC-III/49/l/Ex-gratia dated 18.09.2023 issued by **Ratnesh Kumar Jha, Executive Director (Public Grievances), Railway Board and to be effected from 18.09.2023 and issued with** concurrence of Finance Directorate of Ministry of Railways **and suppressing of earlier letters (1)** 201 l/TC-III/27/29/Ex-gratia dated 26.07.2012 and 07.05.2013**, (2)** 2006/TC-III/27/2 dated 20.12.2006, **(3)** 2002/TC-III/28/3 dated 12.06.2002, **(4)** 93/TC-III/122/l/Ex-gratia dated 21.08.1995, 26.04.1996 and 18.11.1999

Note: Hon'ble Minister of Railways has extraordinary power to enhance the ex-gratia amount as a special case on humanitarian ground on case-to-case basis.

PART III:
COMMERCIAL

INTRODUCTION, ORGANIZATIONAL STRUCTURE, FUNCTION OF COMMERCIAL DEPARTMENT

28

The Indian Railways is the biggest enterprise of Government of India and function direct control of Central Government. Any enterprise or business corporation cannot be run without a strong financial base. Finance is most important for any activities for its sustenance for a longer time. In Indian Railways, this responsibility is given to the Commercial Department, which make it most important department in Indian Railways.

The Commercial Department is responsible for selling Railway services which are produced by Indian Railways. The services produced by railways are categorized as coaching services, freight services, and other services like parcels, catering, parking, luggage, etc. On the other hand, while selling these services to the customers, the commercial department becomes interface with public. Therefore, a deep understanding of commercial working is a necessity for all railway officers.

The commercial department is responsible for fixing fare, freight, and other charges. The collection of fares and freight, its accurate

accounting and remittance of traffic receipts is also one of the main functions. Besides all these things, the commercial department is also responsible for maintaining good public relations with media and people at large.

The Railway business is basically consisting of three segments as under:

a) **Passenger Business (Coaching).**
   Passenger Business is basically running of mail express passenger train and remittance collected from these services.

b) **Other Coaching Business (Parcel, ticket checking)**
   The parcel traffic moving through passenger trains and remitted as other coaching earning. The other coaching earnings consist of Luggage charges, parcels, penalties for irregular tickets, platform tickets.

c) **Sundry Business**
   Sundry business consists of remittance from catering, sidings, various miscellaneous charges collected from passengers and freight customers.

d) **Freight Business.**
   The freight business consists of revenue collected from originating freight loading in form of rake, wagon loads containers, tank wagon loads, etc. and apportionment of revenue in running freight trains across the railways.

28.1 The functions of Commercial Department

The Commercial Department is responsible for the sale of transportation provided by a railway, for creating and developing traffic, for securing and maintaining friendly relations with the travelling and trading public and for cultivating good public relations generally. The fixing of rates, fares and other charges and the correct collection, accountal and remittance of traffic receipts

are also among its functions. Due to its working, the Commercial Department of the Railway is the most visible department as it has public interface and responsible for earning and marketing of the services. The main functions of the Commercial Department may, however, be enumerated as below: -

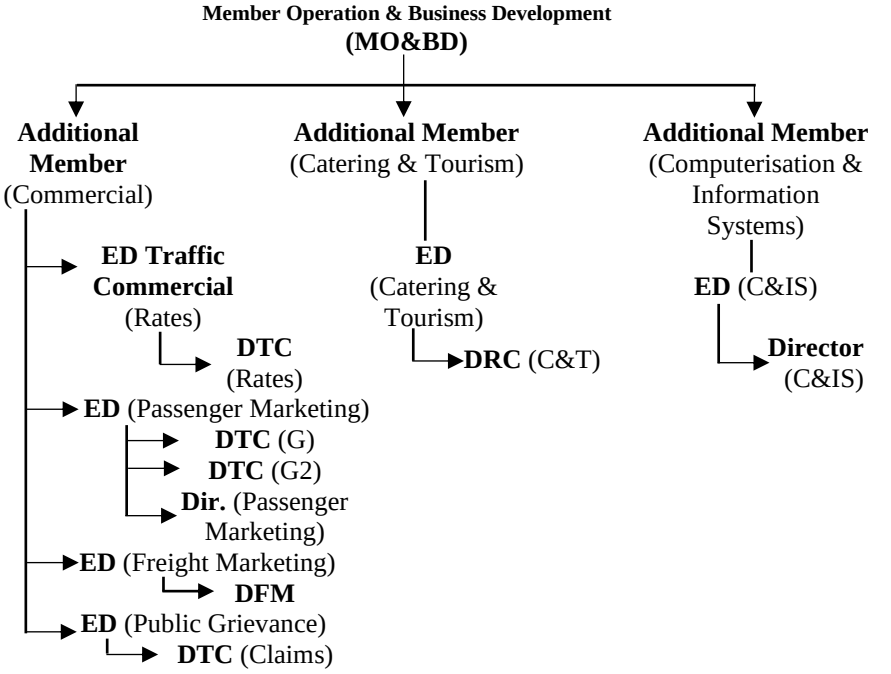
1. Booking facilities for traffic, i.e. opening of booking offices, goods sheds, parcel offices etc. Sale of ticket and booking and delivery of parcels, luggage, and goods.
2. Opening of enquiry and reservation offices for passenger traffic including electronic interface with customers.
3. Designing, Upgradation and implementation of the rating and routing policies for the freight traffic.
4. Time to time issuance of the policies for concession in freight traffic for business development.
5. Maintenance of Passenger Amenities and ensuring their proper up keeps such as waiting rooms, retirement rooms, drinking water supply etc. at every station.
6. Settlement of claims, refund of over-charges in passenger fares and freight rates. Taking measures for claims prevention.
7. Imposition and Waiver of demurrage and wharfage charges.
8. The clearance of the station outstanding i.e. recovery and remittance of dues short-recovered or not recovered.
9. Remittance of station earnings.
10. Ticket checking arrangements at Railway Stations and launching drive for ticketless travelling.
11. Management of departmental catering units, licensing of catering contracts & their supervision.

12. Administration of contractual obligation and collection of siding charges and dealing with siding agreements.
13. Provision of Cloak-Rooms, Lost Property Offices (LPOs).
14. Marketing and sales activities i.e. canvassing for high profit yielding commodities, maintenance of customer-oriented services, like own your wagon scheme, leasing of SLRs scheme, measures for tackling rail-road competition etc.
15. Justification for introduction of new trains, augmentation of coaches, diversion, and extension of mail express trains.
16. Grant of concessions in railway fares and freight rates, including special facilities for tourist coaches etc.
17. Management of Complaints, Customer redressal mechanism and electronic interface with customers.
18. Naming of stations and change of station names etc.
19. Conduction of meetings of SCC (Station Consultative Committee), DRUCC (Divisional Rail Users Consultative Committee), ZRUCC (Zonal Rail Users Consultative Committee), NRUCC (National Rail Users Consultative Council) and correspondence matters related to the same.
20. Managing 'City Booking Offices', 'City Booking Agencies' and 'Out agencies' and other Outreach business.
21. Engaging RTSAs (Rail Travelers Service Agents), JTBSs (Jan Sadharan Ticket Booking Sevaks), GTBSs (Grameen Ticket Booking Sevaks), etc.

28.2 Organization of Commercial Department

a) At Railway Board Level

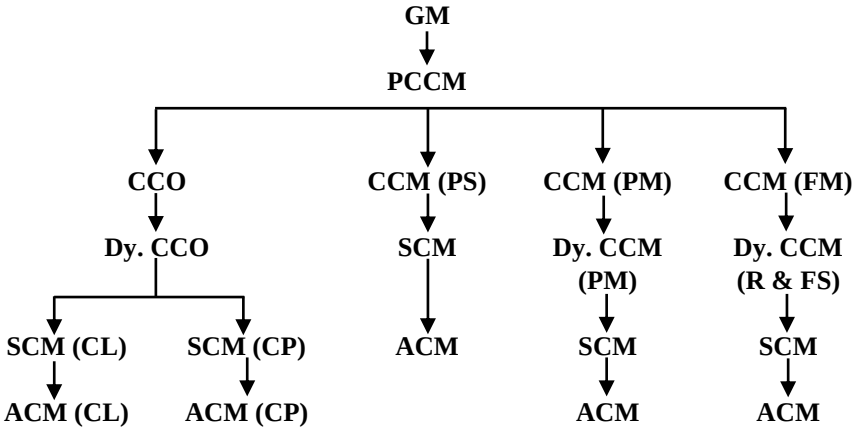
The Member Operation & Business Development (MO&BD), Railway Board is in-charge of Commercial Department in Railways. He is assisted by Additional Member (Commercial), Additional Members (Catering & Tourism) and Additional Members (Computerization & Information System). The additional members are further assisted by Principal Executive Directors, Executive Directors, Directors/Joint Directors, and Deputy Directors, who are looking for the various functions of commercial department as Freight Rates, Coaching Rates, Reservation Catering, Marketing, Claims & Refunds and Research. The organizational structure of commercial department can be seen as under:



b) Commercial Organization at Zonal Railway Level:

Principal Chief Commercial Manager (PCCM) is the functional head of the Commercial department at Zonal level. He reports to the General Manager of Zonal Railways.

The PCCM deals with all general matters in commercial including rates, catering, refunds, claims and public complaints and grievances. He is assisted by CCM (PS), CCM (PM), CCM (FS), CCM (FM) and CCO (Chief Claims Officer). These officers are further assisted by Dy. CCMs and Senior and Assistant Commercial Managers, and inspectorial staff. The organisational structure of commercial department can be understood by the following chart:



Chief Commercial Manager (Passenger Services & Catering) is the nodal officer to monitor passenger amenities related works in the zone. He/ She will look after passenger booking and earnings, ticketing and ticket checking, implementation of Touch & Feel items, model/ Adarsh/ modern World Class/ Amrit Bharat stations, categorizations of stations, halt contract, closure and opening of halt stations, MFCs, Coupon Validating machines, ATMs, cycle stand, car parking,

etc. He/ She will also ensure catering services in the zone and will give policy directives. All catering activities including liaising with IRCTC on catering and vending issues, repatriation of staff from IRCTC to Railway, taking over of various catering units, mobile and static catering units, and inspection of catering activities, monitoring of GMUs & SMUs, agreement with out-agencies, monitoring of pantry cars and base kitchens, financial matters related to catering activities as per SOP. He will also deal with any other items specifically given to him by PCCM or GM.

Chief Commercial Manager (Passenger Marketing) is nodal Officer for monitoring computerized passenger reservation system including NRH, UTS and UTS-cum-PRS, monitoring of allotment of Emergency Quota, coaching refund, NTES, IVRS, Touch Screen, Call Centres and hand held ticket checking machines, provision of connectivity for PRS/UTS at ATMs and post offices, interface with IRCTC/CRIS regarding passenger reservation and application of software and related problems, provision and monitoring of ATVMs, implementation and monitoring of JTBS, monitoring augmentation/detachment of coaches on temporary/day-to-day basis, new and special trains, PPM activities.

CCM (FM) looks after all the matters pertaining to Goods/Parcel. He is responsible for monitoring all freight loading and its growth, marketing for additional freight traffic, demurrage & wharfage, freight rate and related issues like sidings, siding charges, shunting charges and other ancillary charges, development of Goods Shed and Freight Terminals, implementation of Freight Incentive Scheme, various modes of freight payment like CNCC 'Weight Only', E-payment of freight, issues related to FOIS, TMS, RBS, installation of weighbridges, weighment, recovery of punitive charges, freight

refund, warehousing, leasing of plots and go downs, development of agro-retail chain on Railway Stations, examination of Detailed Project Reports for sidings, development of terminals by railway and private parties, uneconomic branch lines, parcel and luggage traffic, leasing of AGCs, SLRs & VPs, running of parcel special trains, parcel handling contract, loading and unloading of parcels, fixation of quota for loading, parcels etc.

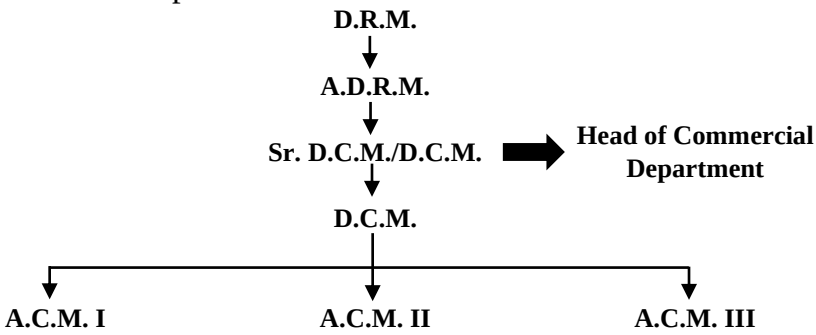
Chief Claim Officer (CCO)- The Claims organization under CCO has two wings, viz. - Claims settlement wing and Claims prevention wing. There is also a legal cell to render legal advice in settlement of claims as well as for processing claim cases taken by the Claimants to Railway Claims Tribunals (RCTs) and another Courts/ Forums/ Tribunal.

c) At Divisional Level

At Divisional Level, the Commercial Department is headed by Sr. Divisional Commercial Manager (Sr. DCM), who is generally in JA Grade or Selection Grade. The Sr. Divisional Commercial Manager (DCM) is assisted by few Divisional Commercial Managers in senior scale depending on the size of the division. The DCMs are assisted by Assistant Commercial Managers (ACMs) dealing with the various commercial function as coaching, goods, general, and in some division catering.

The primary functions of these officers are to implement all the policies and directions issued by the zonal headquarters office and Railway Board. The Sr. DCM is branch officer and reporting to Divisional Railway Managers (DRM) of Division. These officers are further assisted by the commercial inspectors, office clerks and other supervisory staff dealing with several subjects like such as freight, coaching, ticket

checking staff, booking staff etc. the organisational chart of commercial department at division is as under:



d) At Station Level

The Railway Station is the main business centre, where the commercial business is transacted. There are around 8000 stations spread all over Indian Railways. The nature of traffic handled at each station differs and these stations are listed alphabetically in the Alphabetical list of Railway Stations published by IRCA (Indian Railway Conference Association), New Delhi.

Some important and larger stations are headed by the Station Managers (SMs) in Gazetted Gr. B (JS/SS grade). At several stations, however, they are designated as Station Superintendents (SSs). The rank of a SS can vary from grade of a senior supervisor to a Sr. Scale gazetted officer depending on importance of the station.

At smaller stations (also known as roadside stations) the quantum of traffic dealt with is not very heavy. Therefore, at these stations both the operating and commercial working is handled by the SM assisted by Assistant Station Masters (ASMs) in shift duties. At bigger stations, depending on the workload, separate commercial staff is provided to look after the commercial work. They are generally known by a generic

name of Commercial Clerks and may be working as Booking Clerks, Parcel Clerks, Goods Clerks, Ticket Collectors, Inquiry & Reservation Clerks, Catering Managers etc. At still bigger stations, there are all these categories of commercial staff headed by supervisory staff for each function. The designations of these supervisory staff are such as Chief Reservation Supervisor, Catering Inspector, Chief Parcel Supervisor, Chief Booking Supervisor, Chief Goods Supervisor, etc. depending on their functions.

28.3 Conduct of Commercial Staff

The commercial staff must observe the following conduct as given in commercial manual Volume I (105).

a) All commercial staff must
   1. be alert, prompt, helpful, courteous, and obliging.
   2. furnish correct information, or when not able to do so, be helpful and direct enquirers to the official who can do so.
   3. attend to the comfort of all passengers, especially women and children unaccompanied by male members.
   4. maintain a close watch on the movement of traffic and suggest ways and means to promote the flow of traffic to the railways.
   5. pay special attention to the general cleanliness of the station platforms, offices, refreshment rooms, waiting rooms, waiting halls, bathrooms, lavatories, etc.
   6. give, when asked, their names, designations and/or distinguishing numbers without hesitation.
   7. All commercial staff must not

a) solicit or accept gratuities.
b) be in a state of intoxication on duty.
c) smoke on station platforms while on duty, or in uniform.

Discipline

Station Masters and other supervisory staff must inculcate a strong sense of discipline amongst the staff, not only constant vigilance but also by example. Lapses of a minor nature must be promptly corrected on the spot and serious ones taken up.

Reporting for duty

Staff must report for duty on time as prescribed.

Hours of duty

Station Masters and other supervisory staff must ensure that all staff work strictly in accordance with their rostered duty hours, and unauthorized changes in duty are not allowed.

Appearance of staff

All commercial staff when on duty must

1. wear clean uniform, wherever prescribed, and put on distinguishing number badge, armlet, headgear, etc., where supplied; and
2. be smart in appearance.

Use of summer and winter uniforms

Station Masters and other supervisory staff must ensure that the staff wherever supplied with uniforms change over to the wearing of summer to winter uniforms and vice versa from the actual dates notified of these changes by the Administration. The appearance of some staff in summer uniforms and others in winter uniforms on the same day must be avoided. Likewise, a combination of winter and summer uniforms such as winter coats and summer trousers should not be allowed.

Display of posters and notices

Station Masters should be attentive to the cleanliness and orderly

arrangement of public notices and posters. No unauthorized posters or notices should be displayed or pasted on noticeboards or station walls etc. When a notice is superseded by one of the later dates, or is cancelled, it should be removed. When a poster or notice is disfigured by rain or due to any other cause, it should be replaced by a new one.

Display of notices showing the hours of business

Notices showing the hours of business in regional languages, Hindi, and English must be prominently displayed for the guidance of the public at all booking and parcels offices and in goods sheds.

Exhibition of timetables, fare list, etc.

Every railway administration shall cause to be pasted in a conspicuous and accessible place at every-station in Hindi and English and in regional language commonly in use in the area where the station is situated.

1. a table of times of arrival and departure of trains which carry passengers and stop at that station, and
2. list of fares from such station to such other stations as it may consider necessary.
3. At every station where tickets are issued to passengers, a copy of the timetable enforced must be kept in the office of the station master.
4. Copies of the Railways Act, Goods, Coaching Military and Red Tariff should be made available to the public for reference on demand.

Books For Reference

The commercial department is working with various rules, regulations, notifications, and rate tables. There are the following books of reference, which are to be followed.

Railway Board Publications:

d) The Railway Act 1989
e) Indian Railways Traffic Code (Commercial)
f) Commercial Manuals, Vol I (For Coaching Traffic) Vol II (For Goods Traffic)
g) Railway map of India.

Indian Railways Conference Association (I.R.C.A.) Publications:

S.N.	Name of Books	Purpose
1	Alphabetical List	For station codes of 1-4 characters.
2	Coaching Tariff Part I Vol I	General Rules.
3	Coaching Tariff Part I Vol II	Concession
4	Coaching Tariff Part II	Coaching Rate Table
5	Coaching Tariff Part III	Parcel Rate Table
6	Goods Tariff Part I Vol I	General Rules
7	Goods Tariff Part I Vol II	Classification of Commodities
8	Goods Tariff Part II	Freight Rate Table
9	Military Tariff	Rules for Military traffic
10	Red Tariff	Rules for Dangerous goods

Zonal Railway Publications/Notifications

1. Distance Tables
2. Local Coaching Tariff - If Reqd.
3. Local Goods Tariff - If Reqd.
4. Subsidiary instructions issued by individual railways.
5. Timetables and Coaching Guides published by individual Railways.

Important Railway Websites

1. **www.indianrailways.gov.in** –
   Follow the link to 'Railway board directorates' and then 'Traffic Commercial' for all Commercial circulars (Passenger services),

Freight Marketing circulars, and the Freight rate circulars.

2. **www.indianrail.gov.in** –
   Website connected to PRS (Passenger Reservation System) and e-ticketing purposes – for reservation & refund rules, PNR enquiry, Train accommodation availability etc.
3. **www.trainenquiry.com** –
   Web site connected to NTES (National Train Enquiry System)- for Spot your train etc.
4. **https://www.irctc.co.in** –
   Website for IRCTC related ticket booking and tourism activities.
5. **http://www.claims.indianrail.gov.in** –
   Website for settling claims and associated activities.



DEFINITIONS AND TERMINOLOGY USED IN COMMERCIAL DEPARTMENT

29

Definitions

The railway terminology concerned with commercial department is important to be understood before reading the commercial rules, policies, The Railway Act, and appreciation of the subject. Some of the important definitions of terms are given as under:

1. **Authorized**
   Authorized means authorized by a railway administration.
2. **Baggage**
   Baggage means personal effects of a passenger entrusted to a railway administration for carriage.
3. **Booking Railway**
   Booking Railway means the railway on which traffic originates.
4. **Carriage**
   Carriage means the carriage of passengers or goods by a railway administration.
5. **Claims Tribunal**
   Claims Tribunal means the Railway claims Tribunal established under section 3 of the Railway claims Tribunal Act, 1987.

6. **Classification**
   Classification means the classification of commodities made under section 31 of the Railways Act, 1989 for the purpose of determining the rates to be charged for carriage of such commodities.
7. **Class rates**
   Class rates mean the rate fixed for a class of commodity in the classification.
8. **Commercial Staff**
   Commercial Staff includes joint staff employed on both commercial and transportation duties.
9. **Commodity**
   Commodity means a specific item of goods.
10. **Consignee**
    Consignee means the person, named as consignee in a railway receipt.
11. **Consignment**
    Consignment means goods entrusted to a railway administration for carriage.
12. **Consignor**
    Consignor means the person named in a railway receipt as consignor, by whom or on whose behalf goods covered by the railway receipt are entrusted to a railway administration for carriage.
13. **Cross traffic**
    Cross traffic when used with reference to a railway means traffic which passes over that railway but neither originates nor terminates on it.
14. Day begins and ends at midnight.
15. **Demurrage**
    Demurrage means the charge levied for the detention of any rolling stock after the expiry of free time, if any, allowed for such detention.
16. **Destination railway**
    Destination railway means the railway on which traffic terminates.

17. Endorsee

Endorsee means the person in whose favour an endorsement is made, and in the case of successive endorsements, the person in whose favour the last endorsement is made.

18. Endorsement

Endorsement means the signing, by the consignee or the endorsee after adding a direction on a railway receipt to pass the property in the goods mentioned in such receipt to a specified person.

19. Excess value

Excess value in respect of any consignment means the amount by which the value declared by a consignor exceeds the amount of liability of a railway administration as specified or calculated under the rules.

20. Fare

Fare means the charge levied for carriage of passengers.

21. Forwarding note

Forwarding note means the document executed under section 64 of the Railways Act, 1989.

22. Freight

Freight means the charge levied for the carriage of goods including transshipment charges, if any.

23. General Manager

General Manager means the General Manager of a Zonal Railway appointed under section 4 of the Railways Act, 1989.

24. Goods

Goods included.

1. containers, pallets, or similar articles of transport used to consolidate goods; and
2. animals.

25. Government railway

Government railway means a railway owned by the Central Government.

26. GTKM: Unit of measure of work which corresponds to the movement, over one kilometer, of a tonne of vehicle and contents, excluding the weight of motive unit.

27. Indemnity Note

Indemnity Note is an agreement executed between the railway administration and the consignee where the Railway Receipt is lost, mislaid or is for other reasons not forthcoming, and wherein the consignee undertakes to indemnify the railway administration against liability for delivery of consignments to other than the rightful owner.

28. Intermediate railway

Intermediate railway means any railway between the booking and the destination railway.

29. In transit

In transit, in relation to the carriage of goods by railway means the period between the commencement and the termination of transit of such goods, and unless otherwise previously determined.

a) transit commences as soon as the railway receipt is issued or the consignment is loaded, whichever is earlier.

b) transit terminates on the expiry of free time allowed for unloading of consignment from any rolling stock and where such unloading has been completed within such free time, transit terminates on the expiry of the free time allowed, for the removal of the goods from the railway premises.

30. Local traffic

Local traffic, when used with reference to a railway means traffic originating and terminating at stations within the limits of that railway, without passing over any other railway.

31. **Local Traffic Wagons**- A few other wagons in each railway may also not participate in wagon pooling – these are local traffic wagons, which are usually low-capacity wagons used for internal movements such as departmental trains and which do not venture outside their home zone.
32. **Luggage**
    Luggage means the goods of a passenger either carried by him in his charge or entrusted to a railway administration for carriage.
33. **Lump sum rate**
    Lump sum rate means the rate mutually agreed upon between a railway administration and a consignor for the carriage of goods and for any service in relation to such carriage.
34. **Memo waybill**
    A Memo waybill is a waybill prepared from particulars available on the vehicle labels, marks on packages, guidance, etc., in the absence of the Guard foil or Railway Receipt.
35. **Month**
    Month, the calendar 'month' begins at zero hour on the first day of the month and ends at midnight on the last day of the month.
36. **Non-Government railway**
    Non-Government railway means a railway other than a government railway.
37. **Non-Pooled Wagons**- Some wagons may be marked as Non-Pooled Wagons (usually stencilled 'N.P.' on the wagons) – these are usually some special-purpose high-capacity wagons used by various railways that generally earmarked for some operations on that railway or on routes. They do travel to other zones but are not scheduled for further trips by the other railways. When they are loaded to adjoining railways, they are usually marked to be sent back to a station on

the route they took, or back to their home railway by any route.

38. **NTKM:** Unit of measure of goods traffic which represents the transport of one tonne of goods including the weight of any packing, but excluding the weight of vehicle used for transport, over a distance of one kilometer.
39. **Notification**
    Notification means a notification published in the Official Gazette.
40. **Paid-on charges.**
    Paid-on charges are the charges outstanding at the rebooking station in connection with consignments rebooked from that station to another. These include (besides freight) wharfage, demurrage etc., which may have accrued at the rebooking station.
41. **Parcel**
    Parcel means goods entrusted to a railway administration for carriage by a passenger or a parcel train,
42. **Pass**
    A pass means an authority given by the Central Government or a railway administration to a person allowing him to travel as a passenger but does not include a ticket.
43. **Passenger**
    Passenger means a person travelling with a valid pass or ticket.
44. **Percentage charge**
    Percentage charge means the percentage charge payable on excess value calculated in accordance with the rate specified.
45. **Period**
    Period, for the purpose of closing the coaching and goods accounts, the month is divided into three periods

i.e., from 1st to 10th, 11th to 20th and 21st to the last day of the month.

46. Prescribed

Prescribed means prescribed by rules made under the Railway Act.

47. Printed ticket

Printed ticket, includes all card and paper tickets on which fare is printed, such as, tickets issued from self-printing machines and computers, printed journey extension tickets of fixed denomination, etc.

48. Placement Memo: It is a document made in specified pro-forma (Appendix XV/A of IRCM Volume-II) by the trains clerk, in duplicate, showing the particulars of wagons placed for unloading. The placement memo is the basis for posting the wagon transfer register. A copy is handed over to CGS based on which the CGS posts the wagon details in the wagon transfer register.

49. Railway

Railway means a railway, or any portion of a railway, for the public carriage of passengers or goods, and includes.

a) all lands within the fences or other boundary marks indicating the limits of the land appurtenant to a railway.
b) all lines of rails, sidings, or yards, or branches used for the purposes of, or in connections with, a railway.
c) all electrical traction equipment's, power supply and distribution installations used for the purposes of, or in connection with, a railway.
d) all rolling stock, stations, offices, warehouses, wharves, workshops, manufactories, fixed plant and machinery, roads, and streets, running rooms, rest houses, institutes, hospitals, water works and water supply installations, staff dwellings and any

other works constructed for the purpose of, or in connection with, railway.

e) all vehicles which are used on any road for the purposes of traffic of a railway and owned, hired, or worked by a railway; and

f) all ferries, ships, boats, and rafts which are used or any canal, river, lake or other navigable in land waters for the purposes of the traffic of a railway and owned, hired, or worked by a railway administration, but does not include.

i) a tramway wholly within a municipal area.

ii) lines of rails built in any exhibition ground, fair park, or any other place solely for the purpose of recreation.

50. Railway administration

Railway administration, in relation to

a) a government railway, means the General Manager of a Zonal Railway; and

b) a non-Government railway, means the person who is the owner or lessee of the railway or the person working the railway under an agreement.

51. Railway receipt

Railway receipt means the receipt issued under section 65.

52. Release Memo: Immediately after the wagons are released, the Goods Clerk prepares a release memo in duplicate, by carbon process, in the pro-forma appearing at Appendix XV/B, showing the particulars of wagons (loaded or empty) available for removal. The pencil copy of the release memo is made over to the Trains branch after obtaining acknowledgement on the carbon copy, which is retained as goods shed record. The release memo should be filed with the Trains branch in the serial order of their receipt.

53. Railway servant

Railway servant means any person employed by the Central Government or by a railway administration in connection with the service of a railway.

54. Rate

Rate includes any fare, freight, or any other charge for the carriage of any passenger or goods.

55. Regulations

Regulations means the regulations made by the Railway Rates Tribunal under the Railways Act.

56. Station master

Station master includes station Superintendent, Goods Superintendent Inspector/Supervisor, Chief Goods Clerk, or any other person in charge of booking, parcels, goods, or other offices.

57. Station to station rate

Station to station rate means a special reduced rate applicable to a specific commodity booked between specified stations.

58. Siding Charge: It is the charge to be fixed by the Railway Administration from time to time for every wagon whether loaded or empty hauled over a private siding in each direction, except in sidings notified on a through distance basis.

59. Through traffic

Through traffic means traffic carried over two or more railways.

60. Traffic

Traffic includes a rolling stock of every description, as well as passengers and goods.

61. Tribunal

Tribunal means the Railway Rates Tribunal constituted under section 33 of the Railways Act, 1989.

62. Through Distance Sidings: Through distance sidings are ones which have complete facilities for direct reception and dispatch of trains in such way that trains do not require to be dealt with at the station from

which the Siding takes off/serving station but run through to or from the Siding with railway locomotive or originate from or terminate in the exchange/peripheral yard provided by the siding holder.

63. Wharfage

Wharfage means the charge levied on goods for not removing them from the railway after the expiry of the free time for such removal.

64. WTR: is the interval between two successive loadings calculated from the time a wagon is placed for loading till the time it again becomes available for reloading. As the calculations for individual wagons in the manner stated above are not practicable, the following statistical formula is generally used:

Wagon Turn Round (T) = S/ L+R

Where 'S' stands for the effective daily wagon holding or midnight wagon balance of a day (excluding sick, POH wagons in or waiting for shops, like departmental wagons, wagons lent for departmental use, and the wagons used for coaching traffic),

'L' stands for the total number of wagons loaded on the Division/Railways plus the wagons loaded at Transshipment Point,

'R' stands for the total number of loaded wagons received from other Railway/Divisions.

65. Zonal Railway

Zonal Railway means a zonal Railway constituted under section 3 of the Railways Act, 1989.

PASSENGER BUSINESS (COACHING BUSINESS)

30

To a common man in India, the railway means passenger carrying trains, which may be Local trains, Mail Express Trains, Rajdhani or Vande Bharat at present. The people of the country relate themselves with travel by trains. Therefore, it is the prime duty of railway to improve passenger business. The first and foremost thing in the passenger business is to sell tickets and for the customer it is purchasing a ticket.

Ticket is a kind of authority to travel by train. The travel authority may be either a ticket or a free pass. Railway passes are normally issued to railway employees only, barring certain exceptions. In Railway terminology, the sale of a ticket to an intending passenger is called 'booking' of passenger and covered by the authority vested in railways vide section 50 of the Railway Act, 1989.

A passenger may book a ticket at a railway station, a city booking office run by the railways or at other centers authorized by the railways for this purpose such as city booking agency or an out

agency or a travel agency. Besides this, he/she can also book a ticket through internet executed by IRCTC and through agents engaged by IRCTC, and through mobile (pilot project started w.e.f. 01.07.2013)

The names of railway stations, which are open for booking of passengers, as also of other kinds of traffic, are given in the Alphabetical list of Stations, which is published by the General Secretary, Indian Railways Conference Association (IRCA), New Delhi.

All bigger stations have separate booking offices for passenger traffic and are manned by booking clerks. Booking windows are provided for different classes of passengers according to traffic requirements of individual stations. For example, where I class traffic is heavy, a separate I class booking window is provided in addition to the window for II class. Similarly, more than one booking window or direction-wise booking windows are provided according to the requirements of traffic.

At smaller stations,however, a single booking window is provided at the Assistant Station Master's office itself. The hours of opening and closing of booking windows are prominently displayedat the booking window.

At large stations, booking windows are kept open for all the 24 hours except for brief spells of closure at intervals of 8 hours to enabling the booking clerks to change shift duties. At smaller stations booking windows are open for less time but not less than half an hour before the expected arrival of a train.

It is necessary that the passenger timetable and a list of fares charges between stations are displayed at the booking offices. Accordingly, all stations are required to exhibit a list of chargeable fares near booking windows, for stations for which tickets are normally in demand, in addition to the timetable.

Clerkage

Clerkage means a charge levied by a railway administration for the clerical work rendered by it in the refund of fares.

Destination

Destination station means the station for which the ticket has been issued.

RAC ticket

RAC ticket means a ticket on which a seat has been reserved against requisition for a berth and a berth may be subsequently provided against cancellation, if any.

Fare

The fare includes basic fare, supplementary charge on superfast trains and reservation fee.

Reserved ticket

Reserved ticket means a journey ticket on which a berth or seat has been reserved.

Reservation fee

Reservation fee means the charge, in addition to the fare, levied by the Railway administration for the reservation of a berth or seat.

Station

Station means a railway station and includes other reservation offices or booking offices in the same city.

Station master

Station master means a railway employee, by whatever name called, having overall charge of a railway station and includes any other railway employee authorized to grant refund of fare at a Station.

Ticket

Ticket means a single journey ticket or any half of a return ticket but does not include a season ticket, an Indrail Pass ticket or a special ticket for a reserved carriage or a tourist car or saloon, or a special train.

30.1 Classes of Accommodation in Trains

Most of the trains on Indian Railways have the following main classes of accommodation and their codes:

S. No.	Classes of Accommodation	Codes
1	1st AC or 1A	**H**
2	First Class Non-AC	**F**
3	AC Two Tier or 2A	**A**
4	AC Three Tier or 3A	**B**
5	AC Chair Car or CC	**C**
6	Sleeper Class or SL	**S**
7	Second Class Mail/Express	**II**
8	First Class Ordinary	**FC – rarely used**
9	Sleeper Class ordinary	**Rarely used**
10	Second Class Ordinary	**Used in local conventional commuter trains**

All these classes of accommodation are not necessarily available on each train and tickets are issued subject to availability of the type of accommodation on a particular train.

- It is a legal requirement that every train must have a compartment of the lowest class (second class) set apart for lady passengers and Divyangjan.

The mail/express trains and super-fast trains and long-distance trains should also have II class sleeper coaches with sleeping accommodation if journeys involving night travel.

30.2 Availability of Berths

The availability of berths in various types of classes in a conventional BG coachis generally as under:

S.No.	Class	No. of berths
1	1A	14/18
2	2A	44/46
3	3A	64
4	FC	22/24/26 berths or 64 seats
5	SL	72/75
6	II	75/80/90 seats

However, the latest design of coaches including LHB are having higher number of berths/seats and gives more earnings to Railways when booked.

30.3 Passenger Fare

The fares chargeable for railway tickets are prescribed by the Central Government and published in the IRCA CoachingTariff, Pt. II for all classes for distance from 1 to 5000 kms. The fares for II class are different for Mail/Express trains and ordinary trains. The IRCA Coaching Tariff Pt. II also indicates a method by which fares more than 5000 kms can be worked out in a particular case.

Children up to five years of age are carried free and those over 5 years of age but less than 12 years are charged half the fare.

The chargeable fares are, however, subject to a certain minimum chargeable distance as follows (subject to changes from time to time):

Sr. No.	Class	Minimum Chargeable distance
1	AC Class (I AC)	100 km
2	I class	100 km
3	2 Tier AC	100 km
4	3 Tier AC	100 km
5	AC Chair Car	100 km
6	Sleeper class	20 km
7	II class M/E	15 km
8	Ist class (ordinary)	10 km
9	Sleeper class (ordinary)	20 km
10	II Class Ordinary	10 km

In respect of travel in reserved accommodation by certain specified Mail/Express trains known as Super-Fast Trains, an additional charge is also levied in these trains. This charge was introduced to establish the principle that passengers travelling by fast trains should pay for speed and other comforts available on these trains.

In Rajdhani and Shatabdi expresses, however, the fares are higher and

different from other trains as these tickets also include charges for food, bed rolls and beverages supplied to passengers during the journey. All these charges are subject to revision every year.

Service tax is also levied @3.708% (3.6% + 0.072% Education + 0.036% Higher Education cess) on the total fare/charge from passengers w.e.f. 01.10.2012. Presently, service tax is levied from all AC classes and First Class only in all regular trains including these classes in special train/coaches, special trains for film shooting, season tickets, Circular Journey Tickets (CJTs) and Excess Fare Tickets (EFTs).

Besides above, Superfast Charges are also applicable in some identified Mail/Express trains. And, in for classes Reservation Fees and Supplementary charges (details are mentioned in subsequent paras) are also applicable over and above the basic fare.

Differential pricing in Railways is not well developed; however, it has been introduced to balance the Demand and Supply situation by introducing the concept of 'Busy season' and 'Lean season'.

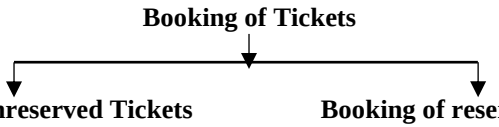
For passenger traffic the seasons are definedas below:

February, March, and August (03 months) and rest 09 months/year are presently considered as 'Lean season' and 'Busy or Peak season' respectively. Charges also vary as per the various schemes such SOFT (Scheme of frequent travellers), Tatkal booking etc. Different discounts are also being offered to passengers depending on the season in regular accommodation on the trains especially for upper classes.

Certain discounts are also being given for the higher capacity coaches being introduced in the trains.

30.4 Booking of Tickets

Every person intending to travel by a train should have a proper authority to travel. This authority is usually either a ticket or a pass. In Railway terminology, the sale of a ticket to an intending passenger is called '**booking**' of passenger. This is covered by the authority vested in railways vide section 50 of the Railway Act, 1989.



Booking of ticket is an important frontline activity of the Indian Railways. Through booking the passengers buy tickets for their journey in Railways. These tickets are the authorities to travel when they are confirmed ones in case of reserved categories. However, in Railway's booking is usually and traditionally been termed as booking of unreserved tickets.

Otherwise for booking of reserved tickets, Passenger Reservation System (PRS) and e-ticketing through IRCTC website, and through mobile phone SMS are used. Thus, in booking office, practically selling of unreserved tickets, platform tickets and other such related activities are executed. Since Railways has started using Unreserved Ticketing System (UTS) in full- fledged manner, booking office activitieshave literally turned into UTS activities.

However, besides UTS, old and manual methods of ticketing through PrintedCard Tickets (PCTs), Blank Paper Tickets (BPTs), etc. are also being adopted in case to case and in place specific manner. Ticket supply, PCTs, BPTs or stationary rolls for UTS is received conventionally from the Railway's ticket printing press (and from private vendors) at periodical intervals. Small stations get their full year's requirement once a year. Others, in the order of their requirements get them every six months or quarterly or even monthly in case the sales are very heavy for certain stations.

For this purpose, the stations send their ticket indents to the Traffic Accounts Office of the railway sufficiently in advance to ensure that the next supply is received before the current stocks are exhausted. The Accounts Office, after scrutiny of the indents, passes them on to the Ticket Printing Press for printing and supply.

On receipt of the supply, the station should check the correctness of the supply and send acknowledgment to the press within a specified time limit. The stock of tickets must be kept in safe custody.

30.5 Day-To-Day Booking

Every Booking Clerk, while commencing the issue of tickets in his shift of duty makes a note of this number which is called the commencing number. At the end of booking for the train or his shift, he takes note of the closing number that is the number of ticket next visible at the bottom of the tube. The difference between the commencing and closing numbers of tickets for each station denotes the number of tickets sold by the Booking Clerk and at the end of his shift he must account for the sale proceeds based on the tickets sold multiplied by the fares, for each station to which sale of tickets has been affected. He hands over this money to the next booking clerk taking over duty, on proper acknowledgment, or to his supervisor in the booking office if any is provided.

The tickets must be issued in serial order each time checking the continuity of the numbers. If any missing number is noticed, he must immediately report this fact to his supervisor or station master, and it must be reported to the authorities in a prescribed manner. Occasionally, a Booking Clerk may come across a duplicate number; in this case he must cancel the duplicate ticket and account it as "non-issued". A ticket wrongly date- stamped must be cancelled and treated as "non-issued". Non-issued tickets are sent to the Accounts Office in a separate cover.

Printed Card Tickets

Earlier usually the ticket issued to a passenger was a printed card ticket (PCT). Itis a small rectangular piece of card bearing the name of the issuing railway in small letters, all over the front side, to form a background. It bears a serial number; names of the issuing and destination stations in Hindi, English, and the regional language wherever possible; the route i.e., the junction or via by which it can be used for travel; the class of accommodation and if for II class, whether for Mail/Express or ordinary passenger train: the distance in kms., and the fare chargeable. Tickets for through booking (i.e., where the originating and/or destination stations are

different Railway Administrations) bear a red wave band.

The card pieces on which the tickets are printed are of different colours for the different classes or accommodation to facilitate identification of the class of travel by visual inspection. There are around 7500 railway stations on Indian Railways, which are open for passenger booking. It should be apparent that it is neither necessary nor desirable and practicable to expect each station to keep a stock of printed card tickets for all these stations. The stations are, therefore, required to maintain stock of card tickets for only those stations for which demand for tickets is more than 10 per day. But a ticket cannot be denied to any passenger on the plea that a printed card ticket for the destination of his choice is not available. In such cases, the passenger is given a card ticket up to the farthest point in the direction of the desired destination, from the available stock, supplemented by a paper ticket for the balance portion of the distance between the station for which card ticket is available and the destination of the passenger.

However, Printed Card Tickets are not in much use these days with the successful implementation of UTS (Unreserved Ticketing System). Therefore, the indenting and stock of these are done only on special occasions and for identified stations only. The existing stock, if not in use, should be disposed of quickly to prevent misuse and malpractice.

30.6 Other Kinds of Tickets and Concessions

Besides Printed Card Tickets there are other kinds of card tickets such as Child tickets, concession tickets, solder's tickets, return tickets, reservation tickets etc.

Child Ticket-

Child Ticket is issued for over 5 years and up to 12 years of age. They are charged for half the fares chargeable for an adult passenger. Separate series of 'child' tickets are printed and kept in stock.

Soldier's tickets

Soldier's tickets are those issued to military and police personnel in exchange for military warrants.

Platform Tickets

Platform Tickets as authority to persons to enter the station platform at stations where entry is regulated.

1. The standard value of Platform Ticket is Rs. 10/- for adults as well as children.
2. It is valid for up to 2 hours.
3. A refund is not granted.
4. Platform ticket holders are not allowed to enter coaches & waiting rooms.

Season Tickets and Vendor's Tickets: -

These are issued for travel on the suburban other non-suburban sections. These can be either monthly season tickets (MSTs), quarterly season tickets (QSTs), half yearly season tickets (HSTs) or yearly season tickets (YSTs). Any number of journeys can be made on them between the specified stations, within the period of validity.

Circular Tour Tickets

These tickets offer unique travel flexibility, as they are issued for journey which begin and end at the same station. These tickets are issued for second & sleeper classes. A maximum of eight break of journeys will be admissible on these tickets. Circular journey tickets are of two types:

Standard Circular Journey Ticket -

1. Offered by Zonal Railways.
2. These cover popular destinations for the convenience of tourists.
3. The details of route, fare etc. for these tickets can be obtained from nominated stations in each Zonal Railways.
4. One can purchase these tickets if any one of the standard routes suits their requirement.
5. This facility is available in all the classes.

Non-standard circular journey ticket –
When circular ticket is issued as per proposed program of passenger, it is known as Non-Standard Circular journey ticket.

Concession tickets-

Railways are granting concession in fares to many different categories of passengers,

1. Such as students for travelling between their educational institution and home places.
2. Students travelling on education tours.
3. Athletes and sportsmen when travelling to participate in tournaments held by recognized sports bodies.
4. Circus parties: artists when travelling to give performances sponsored by the Sangeet Natak Academies.
5. Foreign students on tour to places of artistic or historical importance in India.
6. Delegates to the annual conferences of certain All India Organizations of Social, Cultural or Educational importance when travelling to attend the conference.
7. Teachers at schools proceeding on educational tours sponsored by the Education Departments,
8. Farmers when travelling in parties of 20 or more to see places of agricultural importance on tours approved by the Government Agricultural Departments, blind persons; persons suffering from T.B. and Cancer and proceeding for medical treatment etc.

30.7 Unreserved Ticketing System (UTS)

More than two crore passengers travel in unreserved coaches and trains daily and thus form the bulk of rail users. This facility was initially provided at 10 stations in the Delhi area in the first stage of UTS as a pilot project on 15 August 2002. UTS provide the facility to purchase Unreserved Ticket in advance of the date of journey.

A passenger can buy a ticket for any destination from the UTS counter for all such destinations, which are served by that station. The cancellation of tickets has also been simplified. Passengers can cancel their tickets one day in advance of the journey from any station

provided with a UTS counter.

On the day of the journey, the ticket can be cancelled from the station from which the journey was to commence. The UTS system has taken over the Printed Card Tickets or tickets issued by Self Printing Ticket Machines (SPTMs) gradually. 'Universal terminals' which issue reserved (PRS) as well as unreserved tickets (UTS) from the same booking window has also been implemented at many required locations.

Under this system unreserved tickets are issued to passengers through computer. Features of the UTS are as under-.

1. UTS provide the facility to purchase Unreserved Ticket in advance of the date of journey.
2. A passenger can buy a ticket for any destination from the UTS counter for all such destinations, which are served by that station.
3. The UTS system has taken over the Printed Card Tickets or tickets issued by Self Printing Ticket Machines (SPTMs) gradually.
4. 'Universal terminals' which issue reserved (PRS) as well as unreserved tickets (UTS) from the same booking window has also been implemented at many required locations.
5. In this system tickets can be issued 3 days in advance for distances of 200km and more than 200 kms, and for distances less than 200 kms tickets can be issued on the day of journey itself.
6. Due to the presence of thin client, tickets can be issued uninterrupted even in case of link failure.
7. A special UTS number is printed on the ticket.
8. Maximum 4 passengers can be booked on one ticket.

With the introduction of UTS, the Railways also get benefitted in several ways. These are:

1. Keeping pace with the latest technology
2. Encouraging passengers to purchase their tickets in advance.
3. To have online accountal and other statistical facts and details of tickets sales
4. To have a rational analysis of the demand of passengers on various routes in advance, to augment trains as per requirement.

Advantages of Unreserved Ticketing System

1. Tickets can be issued faster resulting in reduced crowds at booking offices and stations, making ticket purchase more comfortable.
2. Required information is readily available to officers and management.
3. Enable advance planning of unreserved journey also.
4. The chances of fraud are less.
5. Allow Indian Railways to plan extra trains and coaches as per trend of sales registered in the system.
6. Easy accountal.

30.8 Booking of Reserved Tickets:

For booking of reserved tickets, Passenger Reservation System (PRS) and e-ticketing through IRCTC website and through mobile phone are used. Presently advance booking of Passengers Reservation of seats and berths is permitted up to 120 days in advance of the date of the journey. Accommodation is reserved on '**first come; first served**' basis, to the extent of availability. Others can be wait-listed if they so desire. If reservation is confirmed, a reservation ticket is issued on collection of the reservation fee and other charges such as the supplementary charge for travel by certain super-fast mail/express trains or the sleeper surcharge for reservation in 3-tier or 2-tier sleeper coaches, as may be due.

e-Ticketing:

1. This facility is available through IRCTC on the website www.irctc.co.in.
2. For booking of tickets registration should be done on the website.
3. Payment of fare will be done through Credit card, Debit card, e-banking, or cash card.
4. It is not compulsory to produce a photo Identity card at the time of ticket booking but Identity card is must while travelling.
5. Passengers can take a printout of ticket on A4 size paper at home which is known as Electronic Reservation Slip (ERS) or they can show soft copy of it.
6. Reservation message on mobile/laptop is also valid.

7. Maximum 6 passengers can be booked on one ERS.

Reservation of Tatkal Ticket

With a view to provide reservation to those passengers who must undertake journey at short notice and to save such passengers from clutches of unscrupulous elements/touts. The Tatkal scheme was introduced in 1997.

The salient features of this scheme as on date are as under-.

1. Tatkal booking for AC classes opens at 10:00 hours and for non-AC classes at 11:00 hrs. on the day previous day of journey excluding the date of journey from the train originating station.
2. This facility is available in all trains as well as in all classes (except AC- I class & Yuva Train).
3. The reservation under this scheme is available only up to the time of preparation of reservation chart.
4. Under this facility reservations will be given to fully paid passengers.
5. No concession will be given.
6. Four passengers can be booked on one requisition form.
7. The same Tatkal charges will be collected from adults and children.

Tatkal Charges –

Tatkal Charges are 10 % of basic fare for IInd class and 30 % for all other classes, subject to minimum and maximum as below:

Class of Travel	**Minimum Tatkal Charges (in Rs)**	**Maximum Tatkal Charges (in Rs)**	**Minimum Distance for charges (in Km)**
Reserved Second Sitting (2S)	10	15	100
Sleeper	100	200	500
Ac Chair Car	125	225	250
AC-3 tier	300	400	500
AC-2 tier	400	500	500
Executive	400	500	250

1. Reservation Charts will invariably be made at least 4 hours before the scheduled departure of train and in case if the same are not made by the charting section, the system will automatically finalize them 4 hours before the scheduled departure of train and pasted on the notice board.
2. The supplementary chart of reservations made, and cancellations done during the intermittent period (between the preparation of first chart and second chart) will be taken out and handed over to on board ticket checking staff.

Objective of preparing Reservation chart –

1. Convenient for passengers to find accommodation.
2. It is easy for ticket checking staff to check the coaches.
3. It is helpful in controlling the transfer of tickets.
4. It proves useful at the time of accident.

Cancellation of reservation and refund of fare-

The Objective of the refund rule are as Under:

1. To plug the scope of misuse.
2. Facilitate passengers with mobile ticketing/proposed paperless ticketing etc.
3. Discourage touts/agents on black marketing of tickets.
4. Automatic refund of fare on e-tickets in case of cancellation of trains (Already implemented w.e.f. 01.07.2015).

Railway Passengers (Cancellation of ticket and Refund of fare) Rules, 1998 have been revised in view of Computerized Passenger Reservation System (PRS), Computerized Unreserved Ticketing System (UTS) and E-ticketing. Accordingly, and have come into force w.e.f. 12.11.2015 The amendments made in the Refund Rules are aimed at simplification, efficiency in processing and reduction of bogus refund claims.

Cancellation of unreserved, RAC and waitlisted tickets-

Levy of Clerkage per passenger for cancellation of unreserved, RAC and waitlisted tickets: -

a) Unreserved (second class): Rs. 30.
b) Reserved (Second class) and other classes: Rs. 60

Cancellation charge per passenger on confirmed (reserved) tickets -

1. 48 hours before the scheduled departure of the train minimum cancellation charges as below:

Class	Cancellation Charge
AC first/Executive class	Rs. 240
AC- 2 tier/1st Class	Rs. 200
AC-3tier/AC Chair Car, AC-3 Economy	Rs. 180
Sleeper	Rs. 120
Second class	Rs. 60

2. Between 48 hours and 12 hours before the scheduled departure of the train cancelation charges at the rate of 25% subject to minimum charge.
3. Between 12 hours and 4 hours before the scheduled departure of the train cancelation charges at the rate of 50% subject to minimum charge.
4. No refund after the above prescribed time limit.

Cancellation of Partially confirmed tickets- Up to half an hour before the scheduled departure of the train.

30.9 Refund on unused RAC/WL tickets- Up to half an hour before the scheduled departure of the train subject to deduction of Clerkage charge. No refund after the above prescribed time limit.

In case of cancellation of trains- for e tickets w.e.f. 01.07.2015, automatic refund is granted. Filing of TDR is not required. Counter PRS tickets to be cancelled from PRS counter.

Cancellation of e- tickets

1. The e- ticket may be booked and cancelled through internet and the refund of fare shall be credited to the customer's account after deducting the charges applicable.
2. In case of a confirmed e-ticket, refund of fare shall be granted in accordance with rule for unused tickets on which

reservation has been made. In case of RAC e-ticket, refund of fare shall be granted in accordance with rule for unused wait listed and RAC tickets.

3. In case of the waitlisted e-ticket on which status of all the passengers is on waiting list even after preparation of reservation charts, names of all such passengers booked on that Passenger Name Record (PNR) shall be dropped from the reservation chart and refund of fare shall be credited to the customer's account after deducting the Clerkage.
4. In case on a party e-ticket or a family e-ticket issued for travel of more than one person, some persons have confirmed reservation and others are on the list of RAC and waiting list, then in case of passengers on RAC or waitlisted not travelling, a certificate has to be obtained from the ticket checking staff to that effect and refund of fare shall be processed online through TDR, indicating the details of the certificate issued by ticket checking staff.

30.10 VIKALP Scheme

To provide confirmed accommodation to waitlisted passengers and to ensure optimal utilization of available accommodation, Alternative Train Accommodation Scheme (ATAS) known as 'VIKALP' has been introduced in all Mail/Express trains. The features of VIKALP scheme are as under-.

1. Wait listed passenger must give an option at the time of booking of ticket.
2. The passengers can exercise the option for getting shifted to a train up to 72 hours of scheduled departure of original train.
3. No extra charges are taken from passenger, or any refund is provided for difference of fare.
4. Waitlisted passengers of original train are not allowed to board the original train if allotted alternate accommodation.

5. When a VIKALP opted passenger opt to cancel, after he/she has been given an alternate accommodation, he/she is treated as Confirmed passenger and the cancellation rules will apply accordingly.

Reserved tickets are non-transferable and only the persons for whom the reservation is made can use the ticket and the accommodation reserved for him. Berths and seats may be reserved up to 60 days in advance of the journey (the date of departure of the train not being counted). A written application (reservation form) is necessary in a prescribed form, which is available at the reservation offices. This form is to be filled in all respects, i.e., with the train and date of journey, name, age, gender of passengers, the class of accommodation required, the station up to which and number of seats/berths required, train no. and station from which onward reservation is required from an intermediate junction station etc. Any concession or pass should be produced along with the requisition for reservation.

Reservation can also be done on the Internet on the IRCTC website www.irctc.co.in. Two types of tickets are issued, namely I-tickets (wherein normal PRS tickets are delivered through courier service after online booking by the passenger) and e-tickets (wherein no printed form of authority to travel is required, except message/mail for booking/reservation displayed on mobile or any computer/video screen). Booking by mobile phones is also provided by IRCTC (Pilot Project w.e.f. 01.07.2013), where the mobile of the passenger needs to have internet facilities. Only fully paid tickets/messages are issued/sent from the system. Details can be seen on Railways' websites.

These fees/charges are as follows (w.e.f. 01.04.2013):

Class	Reservation Fees (Rs.)	Supplementary Charges(Rs.)
Second	15	15
Sleeper	20	30
AC Chair Car	40	45

AC-3 Economy	40	45
First Class	40	45
AC-3 Tier	50	45
AC-2 Tier	50	45
Ac First	60	75
Executive	60	75

Reservations in AC I Class and I Class can also be made for journeys from any intermediate station, where the train is scheduled to stop, by purchasing a ticket and tendering a requisition in the prescribed form sufficiently in advance. Similarly, advance reservations can be made for return journeys by purchasing a return journey ticket and making a requisition at originating station itself.

A second-class compartment in a carriage can also be reserved for a party on payment of fares for the number of persons travelling subject to a minimum number of fares accordingly to the marked seating capacity of the compartment and the normal reservation fee.

Booking of Special Tourist Car/ Coaches/ Saloons/ Special Trains

1. All the trains/coach/saloons, etc. on Full Tariff Rates (FTR) shall now be booked through single window booking system by Indian railway catering and tourism corporation (IRCTC).
2. Any individual/party/Government agency desirous of booking train/coach on FTR can register online directly or approach IRCTC's regional headquarter office, through mail, telephone etc.
3. IRCTC will co-ordinate with Railway for booking and with facilitation charge at the rate of 5% of the total fare of booking special trains/coaches/saloons on FTR.

4. Registration of special trains/coaches/saloons on FTR shall be made minimum one month in advance and not beyond six months of date of proposed journey.
5. The charges applicable are as under-.
    1. Security Deposit at the rate of Rs. 50,000/- per coach.
    2. Point to point fare on round trip basis.
    3. 30% service charge on point to point round trip basis.
    4. Empty haulage charge for minimum 200 kms.
    5. Detention charge for detention of coach, if any.
    6. GST at the rate of 5% of total fare in case of AC and First-class coaches are utilized.
    7. Superfast charges for superfast service, etc.
    8. Engine detention charge for detention of engine in case of special train, etc.

BOOKING OF LUGGAGE AND DOGS

31

Luggage which is not fully and legibly addressed in English or Hindi will not be accepted for booking and carriage by train. Luggage which is not securely packed will not be accepted for booking and carriage unless the sender or his authorized agent executes a forwarding note and records there in such defects or improper packing.

1. Luggage which is required to travel by the same train with the owner should be presented at the luggage office of the booking station at least 30 minutes before the advertised departure time of the train.
2. Passengers booking their accommodation in advance are permitted to book their luggage in advance at the same time.
3. Bulky surcharge is applicable only on packages weighing above 100 kgs or exceeding 1m*1m*0.7m in outside measurement.
4. Packages exceeding any one of the dimensions

prescribed measurement, but weight is within 100 kgs., on volumetric basis, it will not be treated as specified will be treated as bulky even though the actual weight is less than 100 kgs on volumetric basis.

5. However, if one of the dimensions is exceeded by 10% of the
   bulky. Bulky surcharge will be levied at double the normal rate.
6. Offensive articles, explosive, dangerous, inflammable articles and empty gas cylinders, dead poultry, and game, acids and other corrosive substance are not permitted to be booked as luggage.
7. Trunks, suitcase, and boxes having outside measurement of 100 cms. x 60 cms x 25 cms (length x breadth x height) will be allowed to be carried in the passenger compartments as personal luggage.
8. If the trunks, suitcase, and boxes, which in outside measurement exceed any one of the dimensions, such articles are required to be booked and carried in the brake van and not in the passengers' compartment. The maximum size of the trunks/suitcase that can be carried in the AC-3 tire and AC chair Car compartment is 55 cms x45 cms x 22.5 cms.
9. Oxygen cylinder with its supporting stand with patients under medical certificate can be permitted to be carried in all classes. Free

allowance for luggage will be granted on oxygen cylinder and its supporting stand.

10. Merchandized items are not permitted for booking and carriage in the compartment as personal luggage.
11. Luggage of larger dimensions is to be carried only by brake van. The minimum charge for luggage is Rs.30.
12. As per instructions, there is no restriction on carriage of luggage in brake van of passenger trains as far as quantity and type (personal or merchandise) of luggage offered for booking is concerned. However, the excess luggage in owner's charge beyond the free allowance is charged at 1.5 times the rates under scale-L.

Each passenger is allowed a free allowance up to which he can carry luggage with him in the compartment, free of cost. The free allowance varies for different classes of travel. Children aged 5 and below 12 years are allowed half of the free allowance subject to a maximum of 50 Kgs. There is a maximum ceiling on the luggage which can be carried inside the compartment for each class. These are indicated in the table below:

The following maximum limit free allowance, marginal allowance are admissible for carriage of luggage in the compartment:

Class	Free allowance	Marginal allowance	Maximum quantity permitted (including free allowance)
AC First Class	70 Kgs	15 Kgs	150 Kgs
AC 2-Tier sleeper/First class	50 Kgs	10 Kgs	100 Kgs
AC 3-tier sleeper/ AC chair car	40 Kgs	10 Kgs	40 Kgs
Sleeper class	40 Kgs	10 Kgs	80 Kgs
Second class	35 Kgs	10 Kgs	70 Kgs

31.1 The maximum limit includes free allowance.

Passengers are allowed to book and carry excess luggage beyond the free allowance with them in the compartment up to the maximum limit as per class mentioned above on payment of charge at 1.5 times of luggage rate.

When a passenger is detected either en-route or at the destination with un-booked or partially booked luggage weighing more than the free allowance, the excess un-booked weight exceeding free allowance of luggage is charged at six times the luggage scale rate instead of 6 times of scale -R as earlier. However, if un-booked or partially booked luggage is detected more than the free allowance of then luggage but within the marginal allowance, it is charged at 1.5 times the luggage scale rate. when a passenger is detected either en route or at destination with un-booked or partially booked luggage weighing more than the maximum limit permitted the excess weight exceeding free allowance of luggage is charged at six times of the luggage scale rate subject to a minimum of Rs.50/-.

31.2 Luggage beyond the above quantity can be booked in advance and carried in a brake Van.

If luggage marginally exceeds the free allowance, the person will be charged at the normal luggage rates applicable to your class of travel. Above marginal allowance penalty will be charged, If detected. One should make sure to book excess luggage in the luggage office, pay the prescribed charges and get your tickets endorsed by cross-referencing the luggage ticket details, before commencing your journey. Free allowance is not admissible for articles such as scooters, cycles etc.

31.3 Articles not to be booked as Luggage.

1. Offensive goods: Dried blood, dead bodies, carcasses of dead animals, bones excluding bleached and cleaned bones, municipal or street sweepings or refuse, manures of any kind including mycelium except chemical manures, rags other

than oily rags, any decayed animal or vegetable matter, human ashes, human skeleton, parts of human body.

2. Explosives, dangerous, inflammable articles
3. Bulky articles: Exceeding 280 cubic decimetres.
4. Oil, paint, ghee, grease etc.
5. Dry grass and leaves, wastepaper
6. Dead poultry

31.4 Theft of Luggage and En-Route:

IN case of theft of luggage, robbery / dacoits in running trains, you can approach train conductors/coach attendant/guards or GRP escort. They will give you the FIR Forms, which may be duly filled in and handed over to them. The complaint will then be forwarded to the Police Station for necessary action. You need not break your journey to lodge a complaint with the police. You can also approach the RPF Assistance Posts at major railway stations, for any assistance in lodging the complaint.

31.5 Luggage Is Lost or Damage:

Where value of the luggage booked has not been declared beforehand by the consignor and the prescribing percentage charge did not pay the monetary liability of the railways has been limited to Rs. 100/- per Kg. However, where the consignor has declared the value of the consignment and has also paid percentage charges, he will be entitled to get the claimed amount which will not exceed the value of the luggage so declared at the time of booking. The procedure of payment of percentage charge can be enquired from the luggage booking office.

31.6 Rules for Carrying Pet Dogs in Trains

Indian Railways undertakes transportation of animals such as elephants, Horses, Mules, sheep, goats, dogs and other animals and birds. When it comes to transportation of pet dogs, train is always considered the preferred mode of transport.

Railways provide safe and affordable transport for pet dogs. Passengers have the option of carrying it along with them in first AC accommodation or it can be booked as luggage in luggage-cum-Brake Van under the supervision of the Train Manager (Guard) of the train.

The passenger/pet owner desirous of carrying the Pet dog by train is expected to follow the rules laid down by Railways as given below:

31.7 In carriage with passengers:

1. The passenger must book accommodation in AC-First Class or First Class in 2-berth Coupe or 4-berth Cabin exclusively so that the passenger(s) can travel along with the pet dog. It may be noted that passengers not in possession of AC-First Class/First Class Cabin/Coupe tickets are not permitted to carry their pet dogs along with them during journey. Pet dogs are not allowed to be carried in any other class of accommodation other than AC-first class and first class.
2. Only one dog will be allowed per Passenger Name Record (PNR).
3. The dog must be brought to the luggage office for booking at least 3 hours in advance of the departure of the train, whether the passenger hold PRS ticket or online ticket booked through IRCTC.
4. Prescribed charges in luggage rates as applicable will be collected for the pet dogs to be carried along with the passenger in AC First Class/First Class coupe.
5. Dogs are not allowed to be carried in AC2 tier, AC 3 tier, AC Chair Car, Sleeper Class, and Second-Class Compartments.
6. If fellow passengers subsequently object to the dog remaining in the compartment, it will be removed to the Guard's van, no refund is given.

7. If a passenger is caught carrying dogs without proper booking, penalty will be levied. Owner of the dog will be charged at six times Scale-L luggage rates subject to a minimum of Rs.30 by Indian Railways.
8. Doctor's certificate clearly mentioning the breed, colour and gender of the pet dog is mandatory for booking.
9. Passengers will be solely responsible for the safe carriage of dogs. Owners should make their own arrangements for water and food for the dog during the journey.

31.8 Puppies in basket

1. Puppies can be carried in basket in all the classes of accommodation. Passenger carrying the puppies in basket should hold a confirmed ticket and valid proof of identity. Prescribed luggage charges as applicable will be levied for booking. Doctor's certificate clearly mentioning the breed, colour and gender of the puppies is mandatory. The passenger will be solely responsible for safe carriage of puppies in basket.

31.9 In Brake Van

1. The passengers can book their pet dogs for carriage in the Dog-box available in luggage-cum-Brake Van, under the supervision of the Train Manager (Guard) of the train. only one dog will be allowed in a dogbox at a time.
2. The passenger must hold a confirmed reserved ticket (for journey in the train in which his pet dog is booked) and proof of identity.
3. The dog must be taken to the luggage office, at least 3 hrs in advance of the departure of the train.
4. Prescribed charges in luggage rate will be collected for dog booking. The receipt (Guard's foil) so obtained should be submitted to the Guard of the train at the originating station.

5. At the destination station the passenger foil of the receipt must be produced to the Guard.
6. It is the responsibility of the passenger to provide drinking water and food (biscuits etc) for the dog traveling in brake van.
7. Doctor's certificate clearly mentioning the breed, colour and gender of the pet dog is mandatory for booking.

31.10 Liability of Railways

Railways is not liable for the loss, destruction, damage, deterioration, or non-delivery of animals after the termination of transit.



Tails in Trains (Dog accompanying the passenger in Rajdhani Express)

PARCEL BUSINESS

32

Parcel business is an important segment of Passenger business and categorized as small. The small commodities-households or of business purposes are carried in coaching stock, which is attached in passenger carrying trains, Mail/Express or Passenger. Consignments are loaded in SLRs or assistant Guard Van.

If the parcels are more than these are being loaded in Parcel vans, popularly known as VPUs. When parcels are in plentiful for a destination, special parcel trains run like other coaching trains.

Usually, the parcels are loaded in SLRs in piece-meals or smalls, which are loaded and unloaded by Railways. However, parcels to be loaded in leased SLRs and VPUs are loaded and unloaded by the party, consigner/consignee or endorsee concerned.

The space for parcels in any mail express train as under:

Types of space for the movement of Parcels by Indian Railways	
Type of space	**Details**
Assistant Guard Cabin (AGCs)	• Capacity of 1 tonne. • Leased under 'Comprehensive Parcel Leasing Policy'. • Issuance of lease of 1 tonne parcel space of the AGCs has been called off and no fresh tender shall be called. However, operational contracts for leasing parcel space of AGCs shall be allowed to complete its tenure as per agreement.
Brake Vans (SLRs)	• Mail/express trains and passenger trains have 2 brake vans – one at the front and another in rear. Each van has two compartments of 4/5 tonne capacity and available for lease and non-lease operation. • For every four SLRs in a train, Zonal Railways are allowed to lease up to three SLRs and remaining one is for non-leased traffic booked by Zonal Railways. Leased traffic is governed by the 'Comprehensive Parcel Leasing Policy' and non-leased parcel traffic can be booked departmentally.
Parcel Vans (VPs)	• Capacities of 23 tonne (VPH/high-capacity VPs) and 18 tonne (VPU/8 wheel VPs) available. • VPs, carried by mail/express/passenger trains, are governed by the 'Comprehensive Parcel Leasing Policy', while leased traffic in parcel trains is governed by policy on 'Parcel Cargo Express Trains'. • Non-leased parcel traffic can be booked departmentally at stations. • Based on demand, a Ventilated Parcel Van is added to the train keeping into consideration the maximum hauling capacity of the engine.
Special Parcel Trains (PCET)	• Standard rake composition of 20 VPs and one brake van. • Governed by the policy on Parcel Cargo Express Trains. • Leased out on round trip basis, only on long term contracts through open tender. • Leasing of parcel train is not permitted on short term, temporary or day to day basis.
Refrigerated Parcel Vans (VPRs)	• VPRs are attached to mail/express trains to carry perishable goods like fruits, vegetables, marine products, etc. • As of February 2018, there were only 9 VPRs available with IR3.

Handling parcels is like goods traffic; however, there are certain differences as under:

32.1 Steps in Parcel Booking:

1. **Execution of Forwarding Note (F/Note):** There are four types of Forwarding Notes:
   a. Dangerous goods
   b. Explosives for defense
   c. Animals and general merchandise
   d. General F/Note.
2. **Examination of parcels**:
   Examination of parcels must be done by Railways in accordance with details mentioned by consigner in F/Note. When a consignment is defectively packed or is not packed in accordance with the prescribed packing conditions, or is in a defective condition, the nature of defect should be brought to the notice of the sender, or his agent and suitable remarks obtained from him in the forwarding note. These remarks should be copied out, verbatim, on all the foils of the waybill.
   The staff are forbidden to pass any remarks on the parcel waybills that have not been recorded by the consignor on the forwarding note.
3. **Packing of parcels**:
   Packing of parcels is to be done by consigner in accordance with required packing conditions prescribed by Railways. All parcels must be securely packed in boxes, rates, trunks, strong baskets, or strong gunny, etc., so as to withstand the strain of handling and transferring incidental to their transportation by rail. For certain commodities special packing conditions have been prescribed in the I. R. C. A. Coaching Tariff.
   When a parcel tendered for dispatch is not packed according to the prescribed packing conditions or is insecurely fastened or packed, or shows signs of leakage, or is liable to damage

or deterioration in transit, the exact defect in packing or the nature of the defective condition, etc. should be recorded by the sender or his authorized agent. Vague remarks, like, 'consignment not properly packed' should not be accepted, but the actual defect in packing or condition of articles, such as, 'melons overripe, smelling', 'lids loose, contents leaking', 'tins enclosed in wooden boxes without dunnage on all sides', should be obtained on the forwarding note.

4. **Marking of parcels** –

Marking of parcels is to be done by Railways; Parcel clerk/marker gives identity to each package by mentioning the code initials of the forwarding station, parcel way-bill number, number of packages prefixed "with the letter 'P' and code initials of the destination station. In the case of valuable packages, the destination station's name should be shown in full in block capitals in addition to code initials, as under—

158801

BCT.....DLI (DELHI)

P 15

Here, BCT is the code initial of the booking station, 158801 is the parcel way-bill number, 'P' indicates 'Parcel', 15 denotes the number of packages and 'DLI' is the code initials of the destination station.

In the case of parcels which cannot be marked in this manner, such as baskets of betel leaves, vegetables, etc., the sender must provide a leather, metal, wooden or cardboard label or a gunny strip or tin plates in case of fish consignments, firmly secured to each package at the forwarding station for the purpose of writing railway marks. Packages which are not provided with such labels by the sender should not be accepted for booking. Both the railway and private marks must be shown on the PW. Bill and the Railway Receipt.

5. **Weighment of parcels** –
   Weighment of parcels is to be done by Railways at the weighbridge provided in the parcel office. If the weighing machine is out of order, parcels should be charged on the weight declared by the sender and a remark passed on all foils of the parcel waybill as under—
   "Weighing machine out of order. Sender's weight accepted. Destination to weigh before delivery add recover undercharges due".
6. **Charging of the parcels** –
   Charging of the parcels is to be done as per extant rate table, scale and other conditions applicable, detailed in the section below.
7. **Preparation of parcel waybill** –
   Preparation of parcel waybill is to be done in 4 or 5 copies - local or foreign; the copy for the consigner is called the Railway Receipt (RR)
8. **Issue of Parcel Waybill:**
   a. Pre-payment of charges is a must.
   b. Local and foreign waybills, both have four copies, viz. Record, Waybill, Account &Guard copies.
   c. Percentages charged on certain items, for motor vehicles it is compulsory.
   d. Charge is decided by type of service, distance and weight of parcel.

32.2 Advance Booking for Parcel

To enable major parcel loading parties to plan their logistics in a better way, advance indenting of parcel space in SLRs and in Parcel Vans is allowed. The rules are as under:

1. Advance indenting of Parcel Vans to be attached to passenger carrying trains and time tabled Parcel Special trains are permitted 120 days in advance

subject to payment of Wagon Registration Fee.

2. The advance booking of space in SLRs, Parcel Vans (non-indented) attached in passenger carrying trains, and time tabled parcel special trains shall be permitted 120 days in advance subject to payment of 10% of the total freight by the customer at the time of booking.
3. Balance payment (90%) of the freight shall be ensured at least 72 hours before the scheduled departure of the train- failing which the advance booking will be cancelled, and advance freight will be forfeited.
4. Half (50%) of the advanced freight shall be refunded in case the booking is cancelled at least 72 hours before the scheduled departure of the train.
5. However, there shall be no refund if the cancellation is done after the deadline of the 72 hours before the scheduled departure.
6. In case of railways failure to provide parcel space in train on account of cancellation of train or for any other reason, full advance shall be refunded to the party.
7. Parcels can be booked upto 4 hours prior to the scheduled departure of the trains from that station.

SCALE	TYPES OF SERVICE	TYPES OF TRAINS
L	All luggage	All trains
R	Rajdhani service	All Rajdhani trains
P	Premier Parcel Service	Notified Mail/ Express and Shatabdi trains of all types and special parcel trains having utilization of > 60%
S	Standard Parcel Service	Ordinary passenger trains and other Mail/ Express and Shatabdi Express trains

32.3 Re-weighment of Inward Parcels

All parcels should be re-weighed at destination, except at station where the parcels traffic is heavy, in which case the Divisional

Commercial Superintendent will fix the minimum percentage of short distance (i.e. upto 320 kms) parcels to be re-weighed.

1. All parcels carried over 320 kms. should invariably be re-weighed.
2. The result of re-weighment should be recorded in the column provided for the purpose in the parcels delivery book and undercharges, if any due, recovered before effecting delivery.
3. The result of re-weighment should also be recorded in a re-weighment register, to be specially maintained for this purpose, indicating the date of re-weighment, booking particulars, number and description of packages, contents, names of the consignor and consignee, weight as per waybill and re-weighment, undercharges due, and delivery book folio number.
4. Cases of frequent under-weighment of parcels booked from a particular station or by a particular consignor or of a particular commodity should be specially brought to the notice of the Senior Divisional Commercial Manager for necessary action.

32.4 Parcel Rates

1. Minimum Distance for booking is 50 km. and minimum charge is Rs. 30/-.
2. In the case of newspapers and magazines the minimum distance for charge is 250km and min. charge is Rs. 2.
3. For distance for charge:
    1. First slab is 1-50 km
    2. 10 km slabs (51 kms - 800 km)
    3. 25 km slabs (801- 2050 km)
    4. 50 km slabs (2051- 5000 kms)
4. **Scales for Parcel and Luggage Booking**:
    1. Rates for charging parcel freight are specified for each scale S, P and R separately. These rates are specified according to distance slabs, as specified above and weight slabs of 10 Kgs.
    2. Zonal Railways will notify such Mail/Express/Shatabdi trains for **Premier Parcel Service** whose utilization of parcel space during the preceding twelve months was 60% or more. The notification will be issued by the zonal railways separately for Up and Down directions of the trains.

3. All special parcel trains, fruit specials to be charged at Scale-P.
4. Reserve price for leasing out Millenium Parcel trains - Scale P.
5. Newspapers and magazines at 45 % of Scale S.
6. However, the Railway Board circulates a detailed list of trains by which parcels under different scales are booked.

5. **Bulky Articles:**
   a) Bulky articles are usually not booked by weight, but by volume. On BG & MG, no package exceeding 1.5 quintals (150Kgs) in weight or 2m x 1.5m x1.25m in outside measurement is accepted except by prior arrangements.
   b) Bulky articles can be booked with prior arrangements but charged 25% extra.
   c) If Bulky articles occupy full vehicle, then charged for 6 tonnes per 4-wheeler(BG) and 4.5 tonnes on MG.
   d) Parcels are charged either by weight or by measurement, whichever is more (28 cubic decimeter= 4Kg)

32.5 Railway Material Consignment (RMC) is also booked in parcel. The chargeable freight is realized by raising debits against concerned Railway department. It is booked as any normal parcel; however, it is accepted in RMC Note

Articles not Accepted as Parcel

Following articles are not accepted as parcels:

a) Uranium, Uranium concentrate, Thorium, Thorium nitrate, Thorium oxide, Heavy water, and other Radio-active materials.
b) Offensive articles.
c) Wet skins (other than wet skins of wild animals securely packed in air-tight boxes at Owner's Risk).
d) Acids and corrosive substances as provided in red tariff are not accepted as parcels.

32.6 Delivery of Parcel in the Absence of Parcel Waybill (Railway Receipt)

1. When the railway receipt is lost, delivery of parcels may be

granted to the consignee on execution of an Indemnity Note executed on a non-judicial stamped paper of the appropriate value. If the consignee is a Government official in his official capacity and in case of perishable articles the Railway may allow delivery on unstamped Indemnity Note.

2. Government departments and big firms may use General Indemnity Note also. This is executed for three years.
3. Consignment booked to 'SELF' will not be delivered on the General Indemnity Note.
4. In such cases, delivery may be granted only when the person claiming the consignment produces a stamped Indemnity Note duly executed by the consignor, and countersigned by the Station Master of the booking station under his signature and station stamp.
5. The Note must also be endorsed by the sender in favour of the person to whom the consignment is to be delivered. It is further incumbent on the person claiming delivery to execute a second stamped Indemnity Note duly signed by him along with the surety and two witnesses to the satisfaction of the Station Master at the destination station before delivery can be affected. Separate forms will be used by consignor and consignee.
6. Railway receipt in this case must be presented within ten days or an Indemnity Note on Form I should be executed otherwise this facility will be cancelled.
7. SM must take prior permission of the Sr. DCM before allowing delivery on Indemnity Note in cases when, the consignment is claimed by more than one person, consignment is claimed by a person other than invoiced consignee or when consignment is booked to a sender who is not personally known at the destination station.

32.7 Parcel e-Waybill

The e-way bill, as distinct from the parcel waybill (RR) is a requirement under the GST regime. It is an electronic document that is required to be carried by the person in charge of the conveyance transporting any consignment of goods of value exceeding INR 50,000 (single Invoice/bill/delivery challan). The e-way bill has to be generated by the consignor himself by using the Railway transport ID or the RR number. Where the value of the goods is more than Rs 50,000, both e-way bill and RR must be produced at the time of the delivery. Only when the consignee declares in the prescribed format that the value of the consignment is less than Rs 50,000, can the delivery be made only on the basis of RR alone.

32.8 Over Carried Parcels

When parcels are over-carried on the home line, the Station Master of the station to which the parcels have been so over-carried will book them back to the correct destination under a **free parcel waybill.** However, parcels over-carried from other railways should be rebooked to destination **'To pay'** at the ordinary tariff rates, the outstanding being cleared through a certified overcharge sheet.

Over-carried packages must not be returned un-booked. No charges for the distance over-carried should be recovered by the public.

32.9 Demurrage and Wharfage in Case of Parcels

TYPE OF STATION	PARCEL/ LUGGAGE	LIVESTOCK
Permissible free time for removal of consignment (other than leased) from railway premise:		
Notified station	10 hours of working of delivery section of parcel office after consignment is unloaded	6 hours of working of delivery section of parcel office after consignment is unloaded
Other than Notified stations	18 hours of working of delivery section of parcel office after consignment is unloaded	
Under any circumstance, livestock shall be removed from the Railway premises within 24 hours from the time of their arrival at destination, failing which they may be disposed off in accordance with the provisions contained in sub-section (2) of section 84 of the Railway Act 1989.		
Wharfage charge for excess detention of consignment at Railway premise		
Notified Stations	Rs.1.00 per 50 kg or part thereof per hour or part of an hour	Rs. 10.00 per head per hour or part of an hour.
Other than Notified stations	Rs.0.50 per 50 kg or part thereof per hour or part of an hour	

- The expenses entailed in feeding the livestock will also be leviable irrespective of the fact whether the livestock was removed within the free time or beyond free time.
- When Parcel is booked on full VPU/ BCN rake basis, the extant wharfage rules as applicable for goods traffic are applicable.

Permissible free time for loading/unloading of Parcel Van/ Parcel Rake:

Number of Parcel Vans/ SLRs	Permissible free time (hrs) for loading/unloading of SLRs/ VPs	
	Loading	Unloading
Upto 3 VPs	3	3
4 to 10 VPs + 1 SLR or 2 SLRs	5	5
11 to 15 VPs + 1 SLR or 2 SLRs	6	6
16 to 20 VPs + 1 SLR or 2 SLRs	7	7
More than 20 VPs + 1 SLR or 2 SLRs	8	8
Upto 20 GS + SLR (s)	3	3
More than 20 GS + SLR(s)	4	4

Demurrage charge including penal demurrage charge if any is levied for excess detention of wagon/van at the rate prescribed for goods wagon from time to time. However, in case of detention to individual wagon/van/SLR resulting in detention to entire rake, demurrage is charged on the entire rake. However, demurrage rates for SLR will be 25% of the rate prescribed for goods wagon.

32.10 Evolution of Parcel Policies in Indian Railways

Indian Railway is formulating various policies to consolidate the parcel traffic and make it as a profitable segment. There is huge potential in parcel business. The evolution of parcel policies can be understood with following table:

Table: Evolution of parcels related policies

Year	Phases	Policies
Before 1991	Era of Minimum Intervention in Parcel Traffic	No dedicated leasing policy formulated by IR
After 1991	Phase of Maximizing Space Utilization	1. Scheme for leasing of SLRs (1991) 2. Comprehensive policy towards greater private participation (1999)
After 2006	Phase of dedicated Policies & Amendments	1. CPLP, March 2006 2. Policy on PCET, February 2007 3. SPTO, 2014 4. Revised CPLP, 2014
After 2014 to 2023	Current Phase	1. No further amendments to the policies 2. No fare revision

30.11 Comprehensive Parcel Leasing Policy, 2006

The policy with regard to parcel space leasing was brought in by the Indian Railways in March 2006. It focussed on leasing AGCs, SLRs, and VPs space in passenger trains, including Shatabdi, Rajdhani, superfast trains, and mail and express trains. Some of the key features of the revised Comprehensive Parcel Leasing Policy (2014)

are given below.

1. **Eligibility**: Interested lease holders must be registered with the concerned division/zonal headquarters. Further, the annual turnover of the lease holders should be Rs 2 crore (for category A – all three spaces), Rs 50 lakhs (for category B – AGCs and SLRs), and Rs 10 lakhs (for category C – AGCs).
2. **Registration of lease holders**: Registration fee of Rs 1 lakh for category A, Rs 50,000 for category B, and Rs 25,000 for category C, is required to be submitted along with relevant documents (audited balance sheet, tax submission records, etc.).
3. **Earnest money**: To bid for the space, the registered lease holders are required to deposit earnest money of Rs l lakh for SLR and Rs 4 lakh for VP.
4. **Duration**: The time duration of the lease agreement varies with the space. For AGCs/SLRs, the lease agreement is of
   a) long-term (5 years),
   b) temporary (30 days at a time) and
   c) day-to-day contract (maximum of 10 days).
   For VPs, the agreement is only for long-term lease (5 years).
5. **Reserve price**: The fixation of reserve price has been entrusted with the divisional/zonal railways.
6. **Loading/unloading points**: Besides originating station, lease holders are allowed to load parcels at a maximum of one intermediate station over each zone through which the parcel train passes. **Theft**: "In case of theft, parcels will be unloaded at destination station in presence of chief parcels supervisor (CPS), RPF and lease holder or his representative, and compared with the manifest."

32.12 Parcel Cargo Express Train (PCET) Policy, 2007

Almost a decade ago, the Ministry of Railways came out with a detailed policy on leased cargo express trains for parcel movement in February 2007.The policy set out the set of rules for the operation of leased trains

for parcel movement. Amendments to the policy were brought in June 2010 and June 2016. Some of the key features of the policy are given below:

1. **Service**: Contracts are awarded only for round-trip service on an end-to-end basis, except for North Frontier Railway.
2. **Contract duration**: Parcel cargo express trains shall be leased out for a period of 6 years. For the first 3 years, there will not be any increase in lumpsum leased freight, with an increase of 10% in subsequent years. Parcel Express trains shall not be leased out on a medium term, short term, temporary or day-to-day basis.
3. **Rake composition**: Minimum composition of 15 VPs + 1 brakevan for the first 6 months of contract which can be increased to 20 VPs + 1 brakevan post initial 6 months. Also, the lease holder can run up to 24 VPs subject to permission from IR.
4. **Eligibility criterion**: The interested lease holder should have a turnover of not less than Rs 10 crore per annum during the last three financial years.
5. **Earnest money**: Bidders are required to deposit Rs 1 lakh as earnest money. This amount shall be forfeited in case the successful bidder fails to start operations within 30 days from the date of receipt of the acceptance letter.
6. **Security deposit**: Successful lease holders need to submit security deposit within 30 days of issuance of 'Letter of Acceptance'. The amount stands at 10% of the annual contract value as per the lumpsum lease freight rate (@ rate 20 VPs + 1 brakevan).
7. **Punctuality of train**: The parcel cargo express trains shall run on fixed path with scheduled timetable as far as possible. Transit time of train should be monitored by the operating department.
8. **Space to lease holders**: Free space of 15' x 15' may be provided, till the period of operation of contract, at suitable

location for development of office at originating and destination parcel terminals.

9. **Loading/unloading points**: Besides originating station, lease holders are allowed to load/unload parcels at four stations covering 2,000 km, and one additional intermediate station for trains running beyond 2,000 km.
10. **Theft**: In case of theft, parcels will be unloaded at the destination station in the presence of CPS, RPF and lease holder or his representative, and compared with the manifest.

32.13 Special Parcel Train Operator Scheme, 2014

SPTO scheme is one of the latest policy initiatives of the Indian Railways to increase parcel loading on to its trains through private participation. It allows private parties to procure rolling stock, including general service parcel vans, refrigerated vans, etc., and operate it as special parcel trains. Some of the key features of the SPTO scheme are given below:

11. **Eligibility**: Companies with experience in the field of logistics, warehousing, manufacturing, terminal operation, and wagon leasing, and with a net worth of Rs 20 crore or annual turnover of Rs 30 crore are eligible.
12. **Categories for procurement**: There are two categories.
    (a) General service parcel vans (freight stock) with a minimum of 20 wagons and maximum of 24 wagons, and
    (b) Special purpose vehicles (coaching stock) with a minimum of 15 wagons and maximum of 24 wagons. Amalgamation of two different stocks in a rake has been allowed under the scheme.
3. **Procurement of stock/wagons**: Indian Railways has allowed private operators to procure wagons other than Indian Railways standard designs, subject to approval from the Research Designs and Standards Organization (RDSO). The wagons could also be procured from the wagon leasing companies, subject to approval

from the Railway Board.

4. **Maintenance of wagons/stock**: Maintenance activities will be carried out at Base Depot nominated by the concerned zonal railways and at a predetermined cost. The operator will be charged 5% per annum of the capital cost of private wagons and reviewed every 3 years.
5. **Haulage charges**: IR charges as per the category of stock. Freight stock is charged as per the general service rate for parcel vans notified by the Railway Administration. Under coaching stock, milk tankers are charged as per rates determined specifically for milk movement, while rates for refrigerated vans are 1.45 times the rate charged for VPs for single journey freight.
6. **Operation of SPTs**: It will run on fixed paths with a scheduled timetable. Further, loading and unloading does not require any permission at intermediate stations. Attaching/detaching of coaches is allowed only after approval of Ministry of Railway. However, the minimum composition of rake must be maintained between originating and destination stations.



INTRODUCTION OF FREIGHT BUSINESS IN INDIAN RAILWAYS

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A consignment may be booked as a wagonload or rake load. The same commodity, if booked as a rake load, is charged at a comparatively lower unit rate than a consignment of wagon load. This is mainly because the Railways' assets are put to better use in moving a rake load consignment; the wagon capacity is fully utilized, it moves faster, and the chances of loss or damage are considerably reduced due to elimination of handling at midpoints. The Railways also do not have to incur expenditure on loading and unloading of wagonload as well as rake load consignments as these operations are required to be done by the owners.

A wagonload consignment is subject to a minimum weight for charge. This is termed as a minimum weight condition. This condition is bound to differ according to the nature of the goods booked because different commodities have different densities and a wagon, even when loaded to its capacity, cannot be given the same weight uniformly in the case of each commodity. Livestock are not, however, subject to any minimum weight conditions but they are booked in wagonloads only.

A consignment can also be booked in terms of 'Train Loads'. There are various types of fright wagons/stock, which are suitable for loading different types of commodities. However, as per the design and size (length) of the wagons, rake size of different stock varies. Following table illustrates the same:

Block Rake Size			
Sr. No.	**Type of Wagon**	**Standard Rake size**	**Min.No.of Wagons to be loaded for train load rate.**
OPEN WAGONS			
1	BOXN, BOXNHS, BOXNHA	58	56*
2	BOX	35	30
3	BOST	42	40
4	BKCX	32	30
5	BOY/BOYN	52	50
HOPPER Wagons			
6	BOBR	52	50
7	BOBRNHS	59	57
8	BOB, BOBX, BOXK, BOBS	40	40
9	BOBYNHS	54	52**
10	BRN/BRNA/BFNS	43	41
11	BRHNEHS	42	40
12	BFR/BFK/BFKI	35	30
COVERED wagons			
13	BCN/BCNA/BCNAHS/BCXN	40	38
14	BCX	40	35
15	BCCN	30	29
16	NMG	25	24
TANK WAGONS			
17	BTPN	48	46
18	BCCW (Bulk Cement)	40	38
19	BTPGLN	32	30
20	Tank Wagons - 4 wheelers	72	68
21	Tank Wagon TG type - 4wheeler	64	62

*54 for Kullem-Castle Rock sections.
**45 for Dallirajhara-Bhilai sections.

As an exception to the above Mini rakes for covered wagons, for short distances are also permitted by the Railway board where

Train-load rates are charged for smaller rakes (Lesser no. of wagons loaded.)

33.1 Freight Rates and Calculation of Freight

The Railway Board, for the purpose of charging freight classifies every commodity booked as goods traffic. The commodities have been grouped into 18 groups and 4 divisions.

The 'Train-load rates' for charging these groups/divisions of commodities are prescribed in terms of 'Classes'.

There are a total of 16 classes. Class 100 is treated as the 'Base class', while other classes are in terms of percentages of the base class. There are 11 classes above the base class corresponding to 110%, 120%…210% at intervals of 10%, and are called as Class 110, Class120 etc. up to Class 210 (Highest class) and four classes below the base class corresponding to 90% (LR1), 80% (LR2),70% (LR3),60% (LR4). LR stands for 'Low-Rated' classes. The wagon load consignment is classified at one class higher than Train load or class 150 whichever is higher. However, for commodities classified at Class 210 the wagonload consignment is charged at Class 210 while for commodities classified at LR classes the wagon load consignment is charged at Class 120.

The rates for different distance slabs for various classes are specified in the Freight Rate tables which are published by I.R.C.A. as Indian Railways Freight Tariff Part II.

This classification of the different commodities is based on several considerations. Costly commodities have a relatively higher classification than that of low value commodities. Raw materials are classified at a lower scale than that applicable to finished products of the same raw materials. Density of the material, i.e., its load ability by weight is another factor which influences classification. Certain commodities are liable to break or suffer damage easily requiring a greater amount of care on the part of the railways. The risk involved in transportation and the amount of money that the railways may be called upon to pay in the event of loss or damage to the goods, is yet another factor which influences the higher or lower classification assigned to a commodity. Articles of public consumption are also given

comparatively lower classification - as an act of public policy. Needless to say, that the principles of rating and classification are so important that they form a separate subject of study.

The Railway Board also permits departures from these standardized class rates and the Railway Administrations may quote special reduced rates, called station-to- station rates, or lump sum Rates, for specific commodities for movement between specific stations.

The general classification of the various commodities is published in the IRCA Goods Tariff No. 45, Part I, Vol. II. Changes in the classification are notified to the stations through Rates circulars issued by the Rates Branch of CCM office of each zone from time to time. Similarly, whenever a special rate is introduced, it is notified through the Rates circulars that are issued from time to time giving to stations information regarding the latest changes in rates and other regulations.

33.2 Principles of Rating & Routing

There are situations when it is possible to carry the goods, booked from one station to another, by more than one railway route. In such cases, the principle observed is that the goods will be charged on the basis of the cheapest /rationalized route, but they would normally be carried by the shortest/rationalized route. If, however, the consignor wants his goods to be carried by a route, which is not the cheapest, the charges are collected based on the route selected by him. In this connection, it should be remembered that the physically shortest route is not necessarily the rationalized route also. Rationalized route means a route, which is operationally convenient for the Railways to carry the traffic through.

Normally, the shortest route is the one over, the distance is comparatively less. But, if one or two or more alternative routes available have as break of gauge, transshipment point in between, then the chargeable distance on that route is inflated by 160 kms. for each break of gauge point involved. This inflation is done only for the purpose of comparing the two alternative routes as to their comparative length and not for levy of charges.

In case the cheapest route is not open for traffic, the charges are based on the route open (rationalized route) for traffic.

33.3 Books of Reference for Booking & Delivery of Traffic

Every station is invariably provided with the following reference books and circulars to enable it to book consignments and levy freight charges correctly: -

1. **The alphabetical list of stations** –
   It gives the names of all railway stations in Indian Railways in alphabetical order showing the State and District in which a station is situated, the kind of traffic for which it is open for booking i.e. wagon loads, rake load, whether restricted for certain types of goods, the gauge i.e. BG, MG, NG that serves it, etc.
2. **IRCA Goods Tariff No. 41, Part - I, Vol. I: -**
   This contains the general rules in accordance with which goods may be accepted for booking, charged, delivered, etc.
3. **IRCA Goods Tariff No. 45, Part - I, Vol. II**: -
   This contains the General Classification for the various commodities. Certain commodities are called by different local names, but they are indexed by their most popular names only. If it's name is not found in the general classification, the list of synonyms, trade, proprietary and localnames of articles given in Chapter II of this tariff may be consulted. A commodity that is not found classified is to be charged at the higher class 300.
4. **IRCA Goods Tariff No. 44 - Part II**: -
   These are the Rates Tables showing the amount chargeable towards freight for each class of goods over various distances in kms.
5. **IRCA Red Tariff no. 20**-
   This contains rules regarding booking and delivery of certain commodities categorized as dangerous, such as explosives.
6. **IRCA Military Tariff** –
   This contains the rules regarding booking and delivery as well as the rates applicable to traffic offered by the Defence Department.
7. **Distance Tables** –
   These are used for ascertaining the chargeable distance. There are local distance tables showing the distance from each station to every other station situated on the same railway, and the junction

distance tables, which show the distance from each station up to the junction through which the goods pass over to the adjoining railway.

8. Rates circulars

Rates circulars are issued by the Railways from time to time.

33.4 Procedure of Booking Goods Traffic

The procedure of booking consignment entails the following steps:

1. Registration of Wagon /Rake demand/Placing Indents.
2. Execution of forwarding note.
3. Examination of the goods and their packaging.
4. Weighment of consignments.
5. Marking of packages.
6. Loading the consignment into wagons.
7. Labeling, sealing, and riveting of the loaded wagons and
8. Calculation of freight and issue of Railway Receipts.
9. Unloading of Consignments & Delivery of Goods Traffic

These steps are briefly described below:

1. Registration Of Wagon Demand & Supply of Wagon

If the booking of a wagonload consignment is intended, the consignor should register a wagon demand or it is also called "placing an indent" with the Station Master, on payment of a registration fee which is held as a deposit. The W.R.F. (Wagon registration fee) required to be deposited is as below:

Gauge	For wagon (8-wheeler)	For rake
BG	Rs.500 / wagon	Rs. 15000/-
MG	Rs.400 /wagon	Rs. 12000/-
NG	Rs.300 / wagon	Rs. 1500/-

Wagon Registration fee is not recovered in case of military traffic and railway materials. Major siding owners on the Indian Railways are supposed to deposit alump sum wagon registration fee equal to 3 times average daily loading x W R F per wagon. And they are supposed to recoup only that amount which may get forfeited etc. under the rules.

The Wagon demands registered are noted in a separate register called

"Wagon Indent Register" in serial order and wagon is supplied in the order of registration. But, certain categories of traffic are given priority under the schedule of preferential traffic framed by the Central Government under the Railways Act, 1989. For example, military traffic is given the highest priority as Priority A traffic. Other traffic is similarly placed under priority B, C, and D.

The Wagon registration fee is refunded to the indenter if on allotment of a wagon against his indent, he utilizes the wagon for booking his traffic, but it is forfeited if, after physical supply of the wagon, loading is not commenced within the time allowed for loading or if the wagon indent is cancelled within ten days from the date of registration of the demand.

2. Execution of Forwarding Note

The forwarding Note (F/Note) is of the nature of an application by the person tendering the goods for dispatch by rail in a prescribed form. His agent can also execute it. It is addressed to the Station Master asking him to dispatch his goods to a particular station. It contains the names of addresses of the consignor and the consignee, or the endorsee, description of the goods, number of articles and weight and also a declaration as to the condition of the goods and their packing. The consignor may also specify whether the goods may be dispatched in open wagon and by a dearer route and whether at railway risk or owners' risk in case alternative rates are available for the commodity.

All required entries on the front side of the F/Note are filled up by the consigner, i.e., the person who books the consignment, and the reverse side by the goods clerk/supervisor. the duly filled up F/Note become a contract or legal documentunder the Indian Contract Act, 1972.

Different forms of forwarding notes printed on papers of different colours areused for:

a. General merchandise (buff colour),
b. Animals and articles of special value enumerated in the second schedule to theRailway Act (white colour), and
c. Explosives and Dangerous goods (pink colour)

3. Examination Of Goods and Their Packing

If the booking is intended, the goods may be brought to the goods shed by the consignor along with the forwarding note.

Traffic for wagonloads is to be brought for booking after allotment of a wagon against the consignor's indent, for direct loading into the wagon.

When the goods are brought to the station for booking, the Goods Clerk should, as far as possible, see that the description of the goods given in the forwarding note tallies with the commodity offered for booking as there may be a mis-declaration on the part of the consignor either out of mistake or with an intention to avail a lower rate or to circumvent some provision of the law as in the case of contraband articles or inter-state restrictions, etc.

The goods clerk concerned should then check the condition of the goods and if the goods are found in deteriorated or defective condition, he should obtain a remark regarding the specific defect, in the forwarding note, from the consignor. Similarly, the goods clerk should check the packing condition of the goods and for any defect noticed in this regard also he should obtain remarks from the consignor in the forwarding note, such as 'gunnies old and torn, contents dropping' or 'case weak, liable to give way during handling', etc.

Railways had earlier prescribed elaborate packing conditions for different types of goods, however now these have been simplified and limited to Six Packing conditions (for Bagged consignments, Loose consignments etc.) and three special Packing conditions. These are defined as minimum desirable packing conditions.

4. Weighment of Consignments

All articles accepted for booking must be weighed and their weight recorded on the railway receipt. For this purpose, weighing machines have been provided in all goods sheds and parcel office. While booking wagonload consignments, it is not always necessary to weigh the entire consignment. If it comprises articles of standard size and weight, only a few articles need to be weighed and then the weight of the whole consignment can be computed. There are, however, several cases in which weighment is not possible on the station weighing machine as in the case of wagon load consignments of timber logs or loose materials like gypsum, sand, coal etc. Such consignments must be weighed on in-motion weighbridges after being loaded in the wagon.

If a weighbridge is not available at the station at which such consignments are offered for booking, the RR is issued provisionally showing the weight as declared by the sender and the wagon is marked for weighment at the nearest station having a weigh bridge en-route of the consignment. The weighbridge station in question is required to weigh and advise the weighment particulars to the booking and destination stations.

If at all, it is not feasible to weigh the consignment due to loose, bulky nature or some other reasons, sender's declared weight is accepted provided general safety norms after loading is found acceptable. Such consignments are booked under the Senders Weight Accepted (SWA) remark, and the same is endorsed on the Railway Receipt (RR) to avoid any claims by party on the weight account.

5. Marking of Packages

All packages offered for booking either as parcels, luggage or goods must be marked by the sender indicating the names and addresses of the consignor and consignee. In addition, railway marks are also put on the packages in black ink by railways staff. These marks should indicate the names of the booking and destination stations, the RR number and the number of packages booked under the RR. The usual manner of railwaymarks is as follows:

00976

BRCY ----------NDLS

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In this instance, BRCY is the code name of the booking station viz. Baroda; NDLS is the code name of the destinations station viz. New Delhi, 976 represents the last 3 digits of the RR under which the goods are booked, and the number 20 indicates the number of packages which are booked under this RR (In some zones full 6 digits of RR are written instead of last three digits).

In case of parcels, there is a slight difference in the railway remark e.g.

345621

BRCY ---------- NDLS

20P

Here, BRCY & NDLS have the same nomenclature but 345621 - indicates the Parcel Waybill No. and 20 'P' indicates 20 packages booked as parcels. Railway mark on luggage has similar system only suffix P is replaced by 'L'.

In the case of wagon load only 10% of the packages need be marked except when the consignment is routed via transshipment point in which case all the individual packages should be marked.

Certain types of goods are not easily susceptible to durable and legible marking in ink, such as rubber goods, iron & steel articles, goods packed in baskets, etc. In such cases the consignors should stitch or attach pieces of cloth or gunny to the packages to enable marking. Articles of steel may be marked in white paint instead of ink.

6. Loading of Consignments

(a) Consignments of following descriptions are required to be loaded by the owners, i.e., the consignors:

i. Goods consigned loose or in bulk.
ii. Offensive goods
iii. Goods booked in wagon loads.
iv. Motor vehicles etc. where a minimum weight for charge per article has beenfixed.
v. Heavy machinery, long timber or other heavy articles weighing one tone or moreper piece.
vi. Goods traffic booked to sidings.

Goods, which are required to be loaded by the owners, are also to be unloaded by them at the destination station. However, presently all the consignments are loaded and unloaded by the consignors/consignees only, and not by the Railways. Mechanized loading is usually promoted by the Railways so that loading/unloading time and wagons availability is saved in addition to accrual of other benefits to both Railways and party.

Subject to the exceptions mentioned above, the principle is that wagonload consignments are to be loaded and unloaded by the owners.

(b) For loading heavy articles, it is sometimes necessary to use a crane. Important railway stations are equipped with this facility. There

are cranes of different capacity, 5 tonnes, 10 tonnes, 20 tonnes or more. These may be fixed or mobile cranes. A party requiring the use of crane must pay for it at a prescribed per hour rate. This charge is called cranage. When a station is not provided with a crane and a mobile crane must be brought from a different station at the request of the party, a crane haulage charge is also recovered in addition to cranage. However, this practice by Railways is very negligible these days.

(c) The loading (as well as unloading) by the parties is required to be completed within a prescribed time, call free time from the time of placement of the wagon in position for this purpose, when loaded with heavy articles. When the 'free time' is exceeded, demurrage is recoverable at the prescribed rates which apply on per-hour-basis on the carrying capacity of the wagon.

(d) A wagon supplied for loading must be reasonably clean and otherwise suitable for the kind of traffic to be loaded. It should not have holes or panel cuts, and the case of goods damageable by water, it should be watertight. Important stations are given special mechanical staff and materials to attend to such wagon defects on the spot.

(e) The loading should be performed with due care and caution to avoid damage to the goods. For example, heavier packages should not be placed in a manner which would allow them to roll or fall during wagon movement etc. While loading bagged goods, a space of 18" from the door side should be left vacant to prevent the risk of pilferage through door crevices; in addition, a few bags filled with straw or hay should be placed in the recent space. This is called 'dunnage'. Packages must be handled carefully, and use of hooks should be avoided in the case of bagged goods, piece goods, etc. Moreover, the wagon should be evenly loaded.

When long articles such as rails, timber logs, etc. loaded on a wagon project beyond the buffer, a dummy wagon should be used. Additional charges for dummy vehicles are recovered from the parties.

(f) Supervision of Loading: All loading operations in the goods shed

premises are required to be supervised by the railway goods clerks concerned. At important stations, goods clerks are separately earmarked for this purpose. They are called Tally Clerks also. They should see that the loading is being done in proper manner and keep a count of the number of articles loaded. They maintain Tally Books in which the number and description of articles pertaining to each RR is entered at the time of loading. The Tally Book also shows wagon No. into which a consignment is loaded.

7. Labeling, Pivoting & Sealing of The Loaded Wagons

(a) Marking:

The purpose of marking is to facilitate dispatch of the consignments to their correct destinations and their linkage to the specific Railway Receipts under which they are booked. A similar purpose is served by labelling, which is done after completion, or loading. There are two types: of labels, viz. -

1. Wagon labels and
2. Caution or pictorial labels.

Wagon labels are prepared on the paper cards of a size slightly bigger than post cards, in a prescribed form. They contain name of the booking Railway, names of the booking and destination stations, name of the consignee, description of the commodity, the invoices No. under which the consignment is booked, etc. These are to be written in blue pencil so that the impression does not easily fade away or get washed out during rain. Three types of wagon labels are normally used, viz. paste-on labels, bracket labels and seal labels.

The paste-on labels are pasted on the inner panel of the wagon door on either side. Some of the wagons have an inside pocket in which case this label can be placed and need not be pasted. The bracket label is placed in the pockets provided outside on the wagon body. The seal label is used in conjunction with sealing after the wagon doors are closed. On open wagons, however, which are not sealed, the seal label is tied to the small handles provided on the wagon doors on either side, in addition to the bracket labels.

Wagons containing fragile, damaging, or dangerous goods are provided with caution labels also some of which are printed in pictorial form. There are intended to attract attention of the railway staff concerned with handling and shunting operation so that precautions in handling, shunting; or movement of the wagons, as may be appropriate to the commodity in question, may be observed and any risk by way of damage or explosion may be avoided. These labels are normally pasted on the wagon doors.

(b) Riveting:

After completion of loading, the doors of all covered wagons are properly closed and they are riveted, this is an important duty of the goods clerks as a precaution against thefts from loaded wagons. But wagons containing minerals, charcoal, firewood, grass, livestock and offensive explosive and other dangerous goods are not to be riveted.

(c) Sealing of wagons:

While riveting of wagons is meant for preventing thefts, sealing serves the purpose of localizing them. After loading is completed and covered wagons are closed, bolted, and secured with rivets, they are sealed. Sealing is done under the supervision of a responsible official in such a way that is not possible for any person to get at the goods without breaking the seals. This is achieved by tying the seal card with a tape or wire and covering the knot with melted wax or lead on which the Railway and station names are impressed. Seals are of two kinds, viz. wax seals, and wire lead seals.

Wagons containing commodities like explosives, gases, inflammable liquids, inflammable solids, oxidizing substances, bhoosa etc. are not sealed with wax, as this necessitates the use of a lamp or a naked light near the wagons. Special lead seals with wire shackles, supplied to stations booking these goods, are used for this purpose.

8. Calculation Of Rates & Issue of Railway Receipt

(a) **Calculation of freight** –

The freight chargeable for a consignment mainly depends on the

following three factors, viz.

1. **Weight -.** The weight to be charged is as per the notified Permissible carrying capacityof the wagon.
2. **Distance** - The minimum distance for charge is 100 kms. The distance between two stations is ascertained with the help of the Distance Tables.
3. **Classification of the commodity**
   Classification of the commodity in question, as given in the IRCA Goods Tariff No.45, Part I, Vol. II.

These factors being known, the rate is worked out by consulting the Goods Rates Tables (IRCA Freight Tariff Part II) provided for this purpose. The total freight is then calculated for the given weight, and it is rounded off as per rules given in the GoodsTariff, Par I, Vol. I.

The Freight charges may also differ accordingly as the goods are booked by the consignor at Railway Risk Rate (RR Rate) or Owner's Risk Rate (OR Rate) in cases where OR rate is applicable to the commodity. Most of the commodities, however, are booked at RR rate only. A party while booking a commodity normally charged at OR ratecan avail RR rate by paying 20% more freight but vice versa is not applicable.

Consignments booked from or to Out-Agencies are subject to an Out-Agency charge.

The freight charges for certain traffic are recoverable at the time of booking itself.This is called 'paid' traffic. In other cases, the party can avail 'to pay' facility by paying 5% extra charges over and above normal freight. This facility enables the party to pay due charges at the destination.

Besides above, many other factors also affect the calculation of rates, they are – concessions, incentive schemes, rake load or block load, commodity specific concessions, peak season or lean season, type of commodity apart from general classification, likeessential commodities as declared by Govt. of India from time to time, etc.

(b) **Issue of Railway Receipt** –

Normally, Railway Receipt can be issued of a wagon load consignment, after it has been loaded into the wagon. Separate RR books are supplied to the stations for 'Local' traffic i.e., traffic originating and terminating on the same Railway and for 'through' traffic which terminates on another Railway. Each of these categories also has separate RR books for 'To Pay' traffic and 'Paid' traffic. RR is made out in four foils by using the double-sided carbon paper. The first foil is for record; the second is the Receipt foil to be given to the consignor. The third copy is for Accounts, and the fourth copy is called Invoice, which accompanies the consignments in the wagon. A RR for 'through' traffic has one additional foil i.e., the 5th, which is called transit invoices. The invoice copies of a 'through' consignment are sent to the destination station by post and the transit Invoice accompanies the consignment in the wagon.

The Railway Receipts are serially numbered. They contain names of the booking and destination stations, names, and addresses of the consignors and consignees, number of wagons used, description of the goods books, number packages, actual weight, chargeable weight, chargeable distance, classification at which charged, freight rate, other charges, total freight etc. Normally, the number of packages should be clearly indicated but in cases where the packages or pieces are so numerous and of varying sizes that they cannot be readily counted, or the tally clerks have not supervised the loading, only a "said-to-contain" RR is issued as per declaration of the sender, such as said-to-condition 600 logs. Similarly, in cases where there is some defect in the packing of the consignment, these must be clearly brought out in the RR such as "P/8 not complied with, bags used are old and torn, contents liable to drop in transit", or "goods in damp condition, liable to deteriorate and lose weight in transit", etc. If the weighment of the consignment is not possible for some reason, a "sender's weight accepted" remark is also passed on the railway receipt. RRs with one or more of such remarks are called **'qualified RRs'**. These remarks are intended to

guard the railway against claims for compensation for which the railway is not responsible. A RR without any such remarks iscalled a **'clear R.R.'**.

A consignment may be booked in favour of a particular consignee mentioned by name. It may also be booked to 'self' in which case the delivery of the goods is given to the person in whose favour it may be endorsed by the consignor. The RR is accordingly made out showing the name of the consignee or 'self' in his place.

Under FOIS (Freight Operation Information System) TMS (Terminal Management System) has successfully implemented at all the terminals (goods sheds). RRs are issued through the TMS only and payment is realized through e-payment (under tri-partite agreement – Railways, Party/Consignee and Bank).

9. Unloading of Consignments & Delivery of Goods Traffic

At all goods shed, the unloading of consignments is done by the party, i.e. Consignee, and supervised by the **Goods Clerks**. When a wagon/rake is received at the destinations station, its time of placement and release as well as any defect in the seals, and shortage or damage to the consignment, are noted in the Unloading Register maintained for this purpose. The time of placement and release is essential for recovery of demurrage in respect of consignments which are required to be loaded and unloadedby the owners.

Damage and Deficiency Message or DD Message

If any deficiency or damage is noticed, inside wagon itself when opened &before unloading or unloading of a wagon, the Station Master and a representative of the Railway Protection Force, if available at the station, are to be sent for, and the consignments are checked in their presence. The result of the check is recorded in their presence along with the weight of defective packages found during the check.

The shortage or deficiency noticed in the consignments is reported by telegram to the booking station, any other station enroute if that station had dealt with the consignment, as may be inferred from the seal on the wagon, and to a representative of the RPF. This message is to be issued within 6 hours from the time of opening the wagon for unloading. If the deficiency is noticed from a wagon whose seals were

found defective, a copy of this message is sent to the Railway Police and a written complaint of theft is also lodged with it. This message is called '**Damage and Deficiency Message or DD Message**'.

Sometimes, excess packages may also be found in the wagons, and these are reported to the booking and last sealing stations as soon as the excess is noticed. This is done with a view to looking at their instructions regarding disposal of excess goods. Party is not allowed to take delivery of excess packages until such instructions are received.

Any damage noticed in the consignment, e.g., damage by wet, is also to be similarly reported on the date of unloading.

Weighment of Goods at Receiving Stations (Re-Weighment)

To guard against deliberate or inadvertent under-weighment at the booking stations, the receiving stations are required to exercise a check on the weight entered on invoices. This check should be made by reweighing immediately after unloading. Reweighing may also have to be done to assess the weight of shortages or for giving partial delivery of consignments. Any variation in booked weight and this weighment up to plus minus 2% of total weight, subject to a maximum of 2 quintals per wagon for all commodities and 4 quintals in case of jute, is ignored. But if the weight found is in excess, undercharges should be raised.

Appreciable under-weighments which would have resulted in loss of revenue and frequent discrepancies between invoiced weight and the weight found on re-weighment of consignments booked from any particular stations, are reported to the Sr. DCM or DCM concerned and the PCCM for taking up with the staff of the forwarding station.

Re-weighment At the Request of Owners

Railways do not undertake to weigh the consignments at the destination station as a matter of course. Such weighment can only be considered in exceptional cases when the condition of the consignment or package warrants this.

Requests for re-weighment from the consignee in respect of wagonloads are referred to the Sr. DCM or DCM, who may permit re-weighment at his direction if facilities for re-weighment exist at the destination.

When the request of a consignor or a consignee for re-weighment of wagon load consignments at destination station is accepted on merits of the case, by the Sr. DCM or DCM the charges notified for re-weighment are collected in advance. In addition, demurrage charges due under the rules are also recovered if the request for re-weighment is received after placement of the wagon for unloading.

Check of Inward Invoices & Recovery of undercharges

Immediately on receipt of the invoices, the freight and other charges shownthereon are rechecked at the destination station and undercharges, if any, noticed during this check, are recovered at the time of delivery, along with other charges due.

Station Masters should allow refund of overcharges at the time of delivery in the case of consignments booked freight To Pay, where it is clear that the charges invoiced are incorrect due to any of the following reasons, provided the consignment tallies with the description shown in the invoice.

1. Error in rate not affected by description or condition of carriage.
2. Error in classification i.e., an error where a consignment is correctly described but charged under awrong class; and
3. Error in calculation.

Delivery of Goods on Production of R.R.

The person claiming delivery is required to produce the receipt granted to the sender at the forwarding station. Goods are not to be delivered to any person other than the invoiced or endorsed consignee.

If a person claiming goods as the agent of the invoiced consignee presents an unendorsed railway receipt, delivery should be withheld if such person cannot produce a properly prepared and stamp 'Power of Attorney'.

After delivering the consignment, the signature of the consignee is taken in the Delivery Book.

Delivery Of Goods When RR Is Not Available

When an RR is lost, mislaid, or is for other reasons, not forthcoming, the railway can grant delivery on the authority of an Indemnity Note to be executed on a non-judicial stamp paper of the value chargeable in a State.

An indemnity Bond on un-stamped paper may also be accepted in the following cases, viz.

1. Station Masters may, at their discretion, allow delivery of such articles of trifling value as required, speed delivery, to well-known persons on unstamped indemnity notes.
2. Station Masters may similarly, at their discretion, allow delivery of perishable articles on unstamped Indemnity Note.
3. When a government official is the consignee in his official capacity, he need not execute the Indemnity Note on a stamped paper, but he must execute the same on a standard unstamped Indemnity Bond.
4. Consignments booked to registered co-operative societies.

In case of goods consigned by a sender to 'SELF' when the Railway Receipt is lost or otherwise not forthcoming, delivery may be granted only when the person claiming the consignments produces a stamped Indemnity Note duly executed by the consignor and countersigned by S.M. of the booking station under his signature and station stamp. The note must also be endorsed by the sender in favour of the person to whom the consignment is to be delivered. It is further incumbent on the person claiming delivery to execute a second stamped Indemnity Note, duly signed by him along with a surety and two witnesses to the satisfaction of the Station Master at the destination station before delivery can be affected.

An indemnity Note is required to be executed in the presence of the S.M. as provided on the form itself. However, if a consignee is unable to appear personally before the S.M. for the execution of the Note, he may execute it before a Magistrate or a Justice of Peace, who will attest it under his official seal. Such attested Indemnity Notes may alsobe accepted even though they are not executed in the presence of the Station Master.

Parties of repute having regular dealing with railways can get a facility of "general Indemnity Bond". This is extended by CCM on request for a period of 6 months. Vide such parties need not execute a separate Indemnity Bond for every wagon. They can take delivery of all such wagons on the G.I. Bond provided the relevant RR is produced in ten

days. If that is not done a separate I/Bond has to be executed in respect of all such cases. Wagons booked to "Self" cannot be delivered on this General Indemnity Bond.

33.5 Open Delivery and Assessment Delivery

Sometimes, a consignment is received at the destination station with a shortage in the number of packages or a partial shortage of contents in some packages or in a broken or damaged/deteriorated condition. In such cases, the consignee may ask for verification of the contents or assessment of the damage with a view to recovering monetary compensation from the railway. He may make a request to the Station Master to this effect. He thus may not agree to taking normal delivery of his consignments but ask for special one through tendering application. These special forms of delivery are called 'Open Delivery' or 'Assessment Delivery', besides some others.

S. No.	Open Delivery	Assessment Delivery
1	If it is a question of verifying the shortages.	If it is a question of assessing the damageor deterioration.
2	A representative of the RPF is also associated for witnessing the shortages.	If the assessment; of damage in a certain case involves technical questions with which the commercial authorities are not conversant, they may associate an independent technical expert in theproceedings
3	The consignment is jointly surveyed, the affected packages are weighed, and an account of the shortage is made out by comparing the contents found with those shown in the party's 'RR' or 'beejuk'.	The damaged goods are segregated and arranged into different lots accordingly as the damage is more or less in the different lots and the loss value due to the damage is expressed in terms of percentage.
4	Then a report is drawn up giving details of the joint observation and it is signed by representatives of the Railways	Care is taken to see if the alleged damage had already not occurred before the goods were booked, as may be evident from

	as well as the consignee.	old stains on the containers and remarks on the RR etc.
5	Care has to be taken to see that the report contains a factual account of all relevant aspects of properly establish specific shortages, if any,and information on other aspects which would enable the claims office to take a decision as to whether the railway is responsible or not for payment of compensation. A copy of the Open Delivery Report is given to the consignee.	Such observations are recorded in the Assessment Report, which is signed by representatives of the Railway and the consignee, and a copy thereof is given to the consignee.
6	It occurs due to theft or some otherreasons causing shortage.	It occurs due to inherent property or improper handling of the consignment – damage caused due to moister, water seepage, very long transit time, breaking, etc.
7	It occurs for general nature commodities.	It occurs for commodities, which have less shelf life, perishables – fruits, vegetable, milk, onion, potato, and fertilizers, cement, cereals, etc.

Station Masters of larger stations are empowered to grant assessment Deliveries in cases where the value of the loss in a consignment is not likely to exceed Rs. 3,000/-. At smaller stations, the Station Masters call the Commercial Inspector of the Section who is vested with similar powers for this purpose. But, in case the shortage or damage ismore extensive and is likely to exceed Rs. 3,000/- in value, the Station Master must call a Commercial Officer from the Divisional Headquarters. A suitable time and date are fixed in advance for this

purpose when the consignee is asked to attend the Open or Assessment Delivery.

The open/Assessment delivery is granted without prejudice, and this is mentioned in the report. The implications are that the report is only a factual statement about the consignment, and it does not, in any way, establish the Railway's liability which is decided at a later stage in terms of the compensation if the party prefers a claim against the Railways.

33.6 Demurrage and Wharfage

At the time of delivery of consignments, the consignees must pay the freight and other charges due as shown in the R.R. as well as the undercharges due, if any. In addition, they may have to pay charges called 'demurrage' and 'wharfage', if the time allowed for unloading and removal of the consignments from railway premises is exceeded. These charges are, therefore, in penalty to ensure quick release of the wagons and vacation of the railway premises after expiry of a reasonable time allowed for these purposes. The time so allowed is called 'free time'.

S. No.	Demurrage	Wharfage
1	It is the charge recovered from a party for detaining a wagon/ wagons for loading or unloading beyond 'freetime'.	Wharfage is charged for non-removal of the goods from the railway premises after the free time allowed for this purpose.
2	The ‘Free time’ permissible depend on factors, like different types ofwagons and certain commodities for	This 'free time' extends till the closing time of goods shed on the day followingthe day on which they are made available
	Manual and mechanized loading/ unloading, season – lean or busy, etc.	for delivery. In some goods shed any Sundays, 26th January 15th August and 2nd October are not reckoned in calculating the free time i.e., these are treated as "Dies-non", i.e., if they fall within the "free time", then the free time is extended by one more day.
3	Demurrage for excess detention is levied on entire rake. The entire group of wagons placed for loading/unloading shall be treated	The rate at which wharfage is charged varies according to the importance of the stations.

	as one unit for the purpose of levy of demurrage charges i.e. even if one wagon out of the group is detained for loading/ unloading beyond the prescribed free time, demurrage will be leviable on all the wagons in the group.	
	In case of goods sheds and railway sidings where the placement capacityis less than a rake, the free time starts with the placement of 1st part of the rake. However, intervening periods between the time of completion of loading/unloading of the 1st part and time of placement of 2nd part of the same rake for loading/unloading, is treated as *dies-non*. Demurrage for excess detention is levied on entire rake. Excess detention should be calculated by deducting the permissible free time and periods of *dies-non* from the period of total detention (i.e. period from the timeof placement of 1st part to the release time of last wagon) of the rake.	The stations are divided in three groups depending upon the avg. no. of rakes dealt between 1st Jan. and 30th April. Group I - More than 12 rakes / month, Group II- Between 7 and 12 rakes /month & Group III - Less than 7 rakes / month. The Free time for removal of goods is Group I – 12hrs., Group II-15 hrs. & Group III- 48 hrs. from expiry of free time for loading / unloading. However, for livestock it is 3 hrs. from expiry of free time for loading / unloading.
5	Demurrage charge is levied @Rs.150/- per 8-wheeled wagon per hour, or part of an hour, for detention of wagon in excess of the permissible free time for loading or unloading.	The wharfage charges (w.e.f.01/04/2013)will be levied on per hour basis uniformly for all types of wagons,whether 4-wheeler or 8 wheeler or any other type as given below:

Group I	Rs.150/- per wagon per hour or part thereof
Group II	Rs.120/- per wagon per hour or part thereof
Group III	Rs.75/- per wagon per hour or part thereof

33.7 Rebooking and Diversion

Sometimes, the consignor or the consignee requests change in the destination station of the consignments after booking due to his own business reasons. For these two situations arise primarily due to time factor as when he tenders his request for such change in destination station, which is different from the original one mentioned in the F/Note and RR. Thus, he makes requests either for 'Diversion' or for 'Rebooking'.

The difference between Diversion and Rebooking is illustrated as below:

S.No.	Diversion	Rebooking
1	Diversion of a consignment is done when the train has not passed thediversion point.	Rebooking to a different station is done after it is received at the originaldestination.
2	Permissible in respect of train load consignments only with the approvalof the COMs.	The consignor or the consignee should apply to the S.M. of the station at which the consignment is stored.
3	The original RR is surrendered, and super sessional RR is issued	The original RR should be forwarded to the S.M. with an application along with a duly executed forwarding note, and a new R is issued for the new destination.
4	The diversion is granted only if the consignment has not already reached the original destination and subject to the condition that if, despite efforts on the part of the Railway, the goods still happen to reach the original destination, the party would take delivery there.	The goods are re-booked subject to the route being open for rebooking, and only if the consignment required to be rebooking, and only if the consignment required being in defective condition, the S.M. will advise the consignor or consignee of the condition and weight, etc. of the consignment.
5	No fresh Forwarding Note is required.	On receipt of this advice from the S. M., the consignor or consignee should sign a fresh forwarding note entering thereon all the particulars including the remarks given by the

		S.M., as to the actual condition and weight of the consignment and send it to the S.M. for rebooking.
6	No demurrage and wharfage are involved in this case.	All charges including demurrage and wharfage etc. due at the rebooking station are entered in the rebooking RRs as "Paid-on-to-Pay". Where pre-payment of freight is compulsory, the charges are collected before rebooking.
7	All goods are allowed to be divertedprovided the new destination is open for receiving the consignment.	Perishable goods and goods on whichpercentage charges on value has been paid are not rebooked.
8	A Diversion Fee is required to be paid. And, if diversion takes place, the difference of freight due between the original destination and the diverted point is recovered at the time of delivery.	No such fee except freight for the new distance from the original destination to the new destination is required.
9.	Telescopic rates are extended to the party.	No telescopic rate is extended in this case.

Disposal of Undelivered Consignments

After the termination of transit, a railway administration is accountable for theconsignments for a period of seven days as a bailee.

33.8 Transit Terminates

(a) In the case of goods and animals to be unloaded by the consignees:

If the wagon is not unloaded withinthe free time allowed	On the expiry of such free time
If the wagon is unloaded within freetime allowed	On the expiry of free time allowed for removal of such goods or animals from the railway premises
In the case of goods and animals not required to be unloaded by consignee	On the expiry of the free time allowed for removal of such goods or animals from the railway premises

After the expiry of seven days from the termination of transit, the railway is not responsible for any loss, destruction, damage, deterioration, or non-delivery of goods, arising from any cause whatsoever. In the case of 'excepted' articles, that is those mentioned in the Second Schedule to the I.R. Act, animals, explosives, and other dangerous goods, however the railway's responsibility ceases after the termination of transit itself, i.e. there is no bailees liability in respect of these articles.

Goods still lying with the railway after the period stated above may be disposed of by public auction after giving a notice under the I.R. Act to the consignee or the consignor. This notice stipulates a period of 15 days from its receipt by the party, within which the party should remove the goods after paying the charges due to the railways. If the goods remain undelivered, the railway can dispose them off by auction and the sale proceeds are adjusted towards the charges due to the railway. If any balance amount is still left with the railway, it can be paid to the consignee.

In actual practice, wagonload consignments are auctioned at the destination station itself after giving publicity in the local newspapers unless the local area is so unimportant that the goods are not likely to fetch a reasonable price at the auction. In that case, the consignment is transferred to the nearest important station for auction. Small consignments are, however, not auctioned at the destination station. They are sent to the Railway's Lost Property Office where auctions are conducted periodically.

STATION OUTSTANDING AND HOW TO REDUCE IT

34

The station outstandings represent those amounts for which Station Master has become accountable but he has not liquidated his liability either by remittance of cash or vouchers or by taking special credits as authorized under the rules up to the close of the month. These outstandings generally relate to—

1. imprest cash.
2. disallowances by the cashier.
3. admitted debits.
4. objected debits.
5. freight on To-pay consignments on hand awaiting delivery.
6. freight on To-pay consignments not on band availing delivery.
7. freight on To-pay consignments not on hand, the invoices/waybills for which have been accounted for.
8. freight on To-pay consignments delivered at the siding awaiting payment of the freight charges by

the siding user.

9. freight on To-pay consignments requiring clearance by overcharge sheets due to the consignments having been diverted to other stations or over-carried to and returned by other railways.
10. freight on To-pay invoices not appearing in the delivery books and copied out from machine prepared abstracts.
11. demurrage or wharfage, for the remission of which sanction of the competent authority is awaited; and
12. other miscellaneous items including unsold indemnity notes, timetables, tariffs, etc.

34.1 Register of outstandings. —

All outstanding items referred to in para 2701 in IRCM Volume II should be entered by stations in the register of outstandings. In the case of freight outstandings relating to way-bills invoices accounted for in the same month to which the balance sheet relates, only the lump sum total of such outstandings may be entered in the register of outstandings; in other cases, full details of each item of the outstanding should be entered in the register of outstandings.

(a) The register of outstandings should be prepared in such a way to bring out separate year-wise totals for outstanding against each of the following items:

1. Admitted debits including disallowances by cash office.
2. Objected debits.
3. Freight outstandings in respect of goods on hand.
4. Freight outstandings in respect of goods not on hand.

5. Freight outstandings in respect of invoices enforced in the goods delivery book based on machine prepared abstracts.
6. Goods delivered at the siding, but freight not paid.
7. Wharfage and demurrage; and
8. Other miscellaneous items.

(b) A summary of all the parts referred to above should be prepared on the last page of the register of outstandings, and the grand total of all the outstandings struck. This grand total should be reconciled with the closing balance shown in the balance sheet.

To keep the outstandings register up to date, as soon as an item of outstanding is cleared in the succeeding month, the particulars of clearance should be recorded against the relevant item.

34.2 Outstanding list

At the close of the month, a list of outstandings should be prepared in the prescribed forms from the register of outstandings. This list will be prepared in triplicate, by carbon-process. One copy of the list should -be submitted to Traffic Accounts Office along with the relevant balance sheet and the other two copies sent to the "Senior Divisional Commercial Manager". Sr. DCM will submit one copy of each list received from the stations to the Principal Chief Commercial Manager.

The measures taken for clearance of outstandings including reference to the correspondence with the Divisional Headquarters Office or with the Traffic Accounts Office should be recorded against each item in the outstanding list.

If any items are to be cleared by means of an overcharge sheet, reference to number and date of the letter under which sent, to whom sent and the reasons why an overcharge sheet has been prepared, should be indicated against the relevant item in the outstanding list.

In the case of admitted debits, the name of the person responsible, his father's name, designation, staff No. and the name of the station at which working, together with the reference to statement of recoveries in which the item is shown for recovery from the salary bill, should be given. These details are required to guard against the possibility of any incorrect recovery.

34.3 Clearance of Items of Station Outstanding.

1) **Floating Cash: -**
   All stations which are opened for traffic are provided with some amount in shape of small coins. This amount is known as floating cash. This amount is supplied to the station with the object that the passenger if comes to purchase a ticket and if they do not have sufficient change, to enable the banking clerk to refund the balance amount in the shape of small coins. This amount should always remain at station forever and as it is. No addition/deletion is permitted from this amount.
2) **Cashier's Debit: -**
   This debit is raised by chief cashier for the amount short received or the defaced coins or spoiled or torn notes received along with station remittance through cash remittance note. The cashier debit is to be cleared immediately with in three days by remitting the shortages or replacing the notes and coins because their debit is always accepted debits.
3) **Admitted Debit or Admitted error Sheet: -**
   Error Sheet is documents issued by the Account's Office. It is the result of the internal check conducted by Account's Office on the written/documents submitted by the station. Any short Account, Short collection notice by the Account Office is advised to the station through this document. The Error sheet after scrutiny may be admitted or disputed. Admitted error sheet can be cleared as under: -
   a) Clearance by payment in cash.

b) Recovery through paysheet.

c) Write off ---under competent authorities' sanction.

4) Not Admitted Debits: -

If the undercharges shown by the accounts office in error sheet is not acceptable to the station staff, the Station staff should write on the back side of the error sheet 'Not Admitted. This (not admitted) error sheet must show clear remark on the back side for disputing the debit raised. Non admitted error sheets are cleared as under.

a) Credit advice issued to accounts office to withdraw the debit on paying the convinced by the reason put forth by the special station staff.

b) Credit advice note/credit authority letter being issued by the Travelling Inspector of Accounts on verification of the concerned document and having convinced of wrong/irregular debit.

c) When not admitted debits are returned back by accounts debit for not accepting the reason put forth by the station staff such error sheets are cleared according to the admitted debit or admitted error sheets.

d) Undercharges in inward paid parcel traffic: - Areas of undercharges means the undercharges pertaining to the way of bills or invoices of previous month or and parcel or goods not delivered in end of the current month. All such undercharges should be shown as accounts and whenever the parcels or goods are delivered amount should be forwarded to chief cashier and accounts should be cleared.

5) Freight Outstanding on inward to pay consignment for which consignments on hand –

Such outstanding will be cleared on collection of freight at time of delivery or a notice will be issued to the party

concerned and in response to the notice if the application are received for rebooking, the station master in such case will issue a fresh waybill or invoice for the rebooking of the consignment to new station. All charges due at the rebooking station in addition to the fresh freight are shown in this fresh waybill or invoice. The outstanding due on account of paid or to pay charges at the rebooking station will be cleared by accounting them under special credit in the concerned Balance Sheet. If no responses are received from party, the outstanding may be cleared by auction sale or transferring to the lost property office, only after obtaining the approval of the competent authority.

6) **Inward to pay freight for which consignment not on hand:** Wagon load consignment may get delivered with the approval of DCM to some other destination. In such cases the freight changes if any outstanding and the old destination station will be cleared by the exchange of document called certified overcharge sheet. The overcharge sheet will be prepared and certified by booking station and sent to the station when the debit outstanding and required to be cleared. The amount shown in the overcharged sheet will be taken under special 'Credit' to clear the outstanding.

7) **Govt. Publication for sale and indemnity bonds: -** The unsold Govt. publication will be cleared when they are sold out by taking cash credit. If more stock is received than the requirement of the station such stock of sellable publication should be transferred to printing press or Divisional Commercial Manager's office to clear the outstanding.

8) **Other Misc. Items: -** Generally, Wharfage & demurrage worked on for which authority issued by the competent authority if not forwarded

to traffic accounts office. Traffic account office will object such 'credit' entries; in such cases wharfage, demurrage for gone authority for the competent authority should be obtained and a copy should be sent to traffic account office to clear the outstanding.

34.4 Measures for preventing accumulation of outstandings. — It is of utmost importance that the outstandings at stations are reduced to as low a figure as possible. The Station Master must, therefore, personally interest himself in this important work and periodically scrutinize the outstandings at his station with a view to arranging for their expeditious clearance. Action on the following lines would help in preventing the accumulation of outstandings.

1. Error sheet including disallowances by Cashier should be taken to account immediately on receipt in the first balance sheet in hand.
2. The advice of internal check received from the Traffic Accounts Office should be checked to see if all the error sheets, etc., noted therein, have been brought to account. If not. they should be accounted for immediately and copies of the missing error sheets, if any, called for.
3. Admitted debits should be paid up by the staff immediately on being noticed.
4. In case objected debits, the matter should be pursued with the Traffic Accounts Office concerned and with the Divisional Commercial Superintendent.
5. Where the Inspectors of Station Accounts are authorized to issue credit advice notes on the spot, the Station Master should get the objected debits outstanding at the station scrutinized by the former, when he visits the station for regular inspection or otherwise and obtain credit advice notes from him, wherever due.
6. Where objected debits are subsequently found to be correct, the same should be transferred to the admitted debits' list.
7. Extant rules and orders on the clearance of freight outstandings should be strictly observed by all the staff.

8. Siding charges where these are recovered locally in accordance with the terms of agreement with the siding users must be recovered regularly. In cases of default, an immediate report should be made to the Divisional Office to prevent any accumulation of outstandings. Similar action should also be taken for freight outstandings, if any. in respect of traffic delivered at the sidings.
9. Special efforts should be made to obtain certified overcharge sheet from the Headquarters Office or from other stations and in case there is any delay, telegraphic reminders should be issued.
10. Special efforts should be made to obtain reply from the forwarding stations in respect of freight on invoices enforced based on machine prepared abstracts and in cases of delay telegraphic reminders should be issued and matter reported to the Divisional Railway Manager and Traffic Accounts Office.
11. If there is any delay in obtaining acceptance of debits from the staff transferred to other stations, a special report should be made to the Divisional Office. reference being quoted against the respective items in the outstanding list.
12. Tariffs and rate books must be kept up-to-date and rate advice and other circulars involving changes in rates and fares must be promptly studied and acted upon by the staff.
13. All inward invoices waybills should be checked and undercharges, if any, should be taken to account immediately.
14. Before an invoice or a waybill is accounted for, inward index registers and/or delivery books should be scrutinized to ensure that it had not been ahead accounted for.
15. Recovery of freight and other charges due from other departments of the railway as well as Government Departments, is as important as the recovery of due from the Public and the commercial staff should be ever vigilant and prompt in collecting the necessary credit notes or cheques from them towards payments charges due before the delivery of the consignment is affected.

TICKETLESS TRAVELLING
AND TICKET CHECKING IN RAILWAYS

35

The commercial department's prime responsibility is to ensure that the customers travel with valid tickets. It is important for revenue of railways at one end and at other end it ensures that valid ticket holders are not getting problem from ticketless travellers and un-authorise people. The principal objective behind ticket checking and collection of tickets is as under:

1. ensuring that every passenger is in possession of a proper ticket (or other authority) entitling him to travel by the particular class or train or to enter railway premises.
2. examining whether the tickets have been issued in conformity with the prescribed rules and instructions; and
3. seeing (ultimately) that the tickets have been correctly accounted for in railway books.

The practice of collection of card ticket is given away as now card tickets are not issued but seeing the ticket or travelling authority is the practice followed. The commercial department always makes

Vigorous and sustained efforts towards combating ticket less traveling. The tickets of the passengers should be checked:

1. when they are entering the platform for entraining.
2. en-route, by the ticket checking staff; and
3. at destination, where the tickets are again checked then passenger are allowed to leave the station premise.

To facilitate effective check and collection of tickets, all important stations should, as far as possible, be properly fenced or barricaded so that no person may be able to enter or leave the platform without having to pass through the gate and showing his ticket. Station Masters should frequently inspect the fencing and arrange to have unauthorized outlets closed.

Station Masters of stations not provided with proper fencing should, when trains stop at their stations, depute one or more members of their staff, to assist the Ticket Collector or any other member of the staff performing the duties of ticket checking in seeing that no person enters or leaves the train without his ticket or pass being examined or collected.

35.1 Duties of Traveling Ticket Examiner

The duties of Travelling Ticket Examiners are to travel over their 'beats' to check irregularities of all kinds connected with passengers travelling without tickets. The TTE must perform following duties-

1. The people travelling without ticket, out of date or otherwise irregular, overriding or travelling in higher class carriages than they hold tickets for, or travelling by trains by which their tickets are not valid,
2. To check the luggage of passengers, to see that it is correctly booked and to detect and prosecute or to report against persons who cheat or attempt to cheat the railway of its legitimate dues, and to recover such dues.

3. They must examine the luggage tickets held by passengers and see on how many tickets the free allowance has been given and whether such tickets are held by the passengers.
4. The tariff rules about the carriage of over-sized packages, dogs, birds, etc., with owners should also receive attention.
5. In their dealings with the travelling public, the Travelling Ticket Examiners should always bear in mind that passengers holding proper tickets some time feel annoyed at being called upon to produce their tickets, particularly if this is required frequently during their journey, and such passengers are likely to look on the work of ticket checking as causing harassment.
6. Ticket checking staff should, therefore, note that in the performance of their duties, the greatest tact and politeness is no less important than the necessary firmness.
7. Similar checks should be conducted in respect of brake vans of goods and passenger trains and engines to apprehend irregular travelling.

Faqirs, sadhus and other mendicants, who travel without ticket and have no money, should be sent up for trial under section 137, and not under section 138 of the Railways Act, as they obviously intend to defraud the railway. The charge-sheets with which such persons are made over to the police, must be carefully prepared showing that prosecution is, to be undertaken under section 137 of the Railways Act.

The staff must prevent, as far as possible, such persons coming on to platforms, and boarding trains, unless they are in possession of proper tickets. Checking staff and Guards should make it a point to ascertain whether or not such men have tickets whenever they see them in their trains, and, if without tickets, remove them from trains

and make them over to the station staff at the first stopping station for prosecution.

In all cases where indigent persons are found traveling without tickets, the staff should obtain particulars of the station at "which such individuals entrained. This information should be verified, if possible, by reference to other passengers traveling in the same carriage. The matter must then be reported to the Divisional Commercial Manager, who will take suitable action against the staff at the entraining station for allowing the passengers to entrain without tickets.

35.2 Penalties and offences as described in Railway Act 1989

Sections	Description	Fine/Imprisonment
137	Fraudulently travelling /attempting to travel without proper pass or ticket.	Fine up to Rs. 1000/-, imprisonment up to 6 months or both and Excess fare + Excess charge.
138	Travelling without ticket or pass or insufficient ticket or pass or travel beyond authorised distance or in higher class	Excess fare + Excess charge. Difference of fare paid & payable + Excess charge, in default of payment of fine imprisonment up to 1 month.
141	Needlessly interfering with the means of communication of a train without reasonable & sufficient cause.	Fine up to Rs. 1000/- or imprisonment up to 1 year or both.
142	1) Persons who sells or parts with Reserved ticket, any ticket, season ticket or any half of return ticket	Fine up to Rs. 500/- or imprisonment up to 3 months or both, forfeiture of ticket.
	2) Person who purchases and travels on such tickets.	Fine up to Rs. 500/- or imprisonment up to 3

		months or both, forfeiture of ticket and Excess fare +
143	Penalty for unauthorized carrying on business of procuring & supply of reservation tickets abetting.	Fine up to Rs. 10000/- or imprisonment up to 1 year or both, forfeiture of ticket.
144	Prohibition on hawking and begging upon a railway premises.	Fine up to Rs. 2000/- or imprisonment up to 1 year or both, removal from railway premises.
145	Drunkenness or nuisance upon a railway premises.	Fine up to Rs. 500/- or imprisonment up to 6 months forfeiture of ticket & removal from railway premises.
146	Obstructing Railway servant in the discharge of his duties.	Fine up to Rs. 1000/- or imprisonment up 6 to months or both.
147	Trespass and refusal to desist from trespass	Fine up to Rs. 1000/- or imprisonment up to 6 months or both, removal
155	1) Entering into a compartment reserved 2) Resisting entry into a compartment not reserved	Fine up to Rs. 500/- & removal Fine up to Rs. 200/-
156	Travelling on roof, step and footboard or at place not meant for travel.	Fine up to Rs. 500/- or imprisonment up to 3 months or both, removal
157	Altering or defacing pass or ticket	Fine up to Rs. 500/- or imprisonment up to 3 months or both.
162	Entering reserved carriage or other place reserved for exclusive use of females without lawful excuse.	Fine up to Rs. 500/- forfeiture of ticket & removal
164	Unlawfully bringing Dangerous goods on a railway premises.	Fine up to Rs. 1000/- or imprisonment up to 1 year

		or both, responsible for loss, injury or damage.
165	Unlawfully bringing offensive goods on a railway premises	Fine up to Rs. 500/- responsible for loss, injury or damage.
167	Prohibition on smoking	Fine up to Rs. 200/-

35.3 Important Sections of The Railway Act 1989 related to Ticket Checking staff.

Sections	Provisions
49	Exhibition of certain timings and fares at stations.
50	Supply of tickets on payment of fares.
51	Provision for case in which ticket issued for class/train not having accommodation for additional passengers.
52	Cancellation of ticket and refund.
53	Prohibition against transfer of certain ticket.
54	Exhibition and surrender of passes and tickets.
55	Prohibition against travelling without ticket or pass, provision for issue of GC.
56	Power to refuse to carry persons suffering from infectious and contagious diseases.
57	Fixation of maximum number of passengers for each compartment.
58	Earmarking of compartment etc. For exclusive use of females.
67	Provision of carriage of dangerous or offensive goods.
100	Responsibility of Railway administration as carrier of luggage.

CUSTOMER AMENITIES
(PREVIOUSLY PASSENGER AMENITIES)

36

The railway station is the first point of contact between the railway and its passengers. This is the gateway through which people find their way into a town or city. World over Railway stations are undergoing a major shift. Hence, special attention is required to passenger facilities at stations. Stations of Indian Railways have been classified in several categories depending upon the passenger earning which is an indicator of the passenger traffic. As the passenger traffic is increasing day by day, it is the duty of the administration to consider the growing demand of passengers and to provide the required customer amenities, while planning for provision/augmentation of stations.

The annual passenger earnings are an important parameter for deciding upon the category of a station. It consists of earnings from both reserved and unreserved passengers. With the introduction of PRS, the earnings accruing at a PRS center may not reflect the actual earnings of the station. Therefore, earnings in respect of reserved passengers should be taken based on

passengers boarding the trains from the station and same should be obtained from various PRS centers from where the passengers for those stations are booked.

In respect of earning from the unreserved passengers, the data should be collected from the tickets sold through UTS/ ATVM/ CoTVM/ JTBS/ STBA/ UTS on Mobile App, etc. The method for calculating earnings from UTS for passengers boarding the trains at a station would be the same as that for PRS.

In a recent change (28/09/21), Passenger amenities has now been renamed as **'Customer Amenities'**. Creation/upgradation of freight customer amenity works have also been included as part of overall customer amenities works.

36.1 Categorization of Stations

Categorizations of Railway stations is revised after every 5 years. Earlier categorization was done in 2012 and provided for 7 categories of stations, namely, A1, A, B, C, D, E and F, based on annual passenger earnings. In 2017, the categorization was revised based not just on passenger earnings but also on the number of outward passengers handled. Data for originating passengers and originating earnings was used in the new categorization.

Railway stations have now been categorized into three groups based on earning and outward passenger handed. The customer amenities keep changing as per development of the stations and need. The Railway Board has also revised the guidelines based on the requirements of the public from time-to-time. However, the basic amenities are constant, and Railway needs to provide the same for travelling people's benefit.

- Non-Suburban Group (NSG 1 to NSG 6)
- Suburban Group (SG 1 to SG3)
- Halts Group (HG1 to HG3)

Categorization of stations for the period 2017-18 to 2022-23					
Category of stations	**Criteria of Earnings**	**Number of stations based on earnings**	**Criteria of outward Passengers handled**	**Number of stations based on passenger handled**	**Total number of stations**
Non-Suburban stations					
NSG 1	> 500 Crore	14	> 20 million	7	21
NSG 2	> 100 crore ≤ 500 Crore	70	> 10 million ≤ 20 million	7	77
NSG 3	> 20 Crore ≤ 100 Crore	218	> 05 million ≤ 10 miliion	9	227
NSG 4	> 10 Crore ≤ 20 Crore	210	> 02 million ≤ 05 million	76	266
NSG 5	> 01 Crore ≤ 10 Crore	1046	> 01 million ≤ 02 million	10	1056
NSG 6	≤ 01 Crore	4238	≤ 01 million	0	4238
Suburban stations					
SG 1	> 25 Crore	24	> 30 million	11	35
SG 2	> 10Crore ≤ 25 Crore	52	> 10 million ≤ 30 million	22	74
SG 3	≤ 10 Crore	398		0	398
Halt stations					
HG 1	> 50 lakhs	18	> 03 lakh	12	30
HG 2	> 05 lakh ≤ 50 lakh	538	> 01 lakh ≤ 03 lakh	30	568
HG 3	≤ 052 lakh	1728	≤ 01 lakh	0	1728
Total		**8554**		**184**	**8738**

36.2 Classification of Customer amenities

The latest classification has been put in place by the Comprehensive Instruction for Provision of Customer amenities, issued by Railway Board on 09.04.18.

There are four classes of customer amenities:

A. Minimum Essential Amenities (MEA)
B. Recommended Amenities (RA)
C. Desired Amenities (DA)
D. Amenities for Physically Handicapped Persons (Divyangjan)

36.3 A. Minimum Essential Amenities:

When a station is constructed, certain minimum amenities are required to be provided at each category of station. These were earlier termed as basic amenities/ infrastructural facilities and now called Minimum Essential Amenities (MEA).

Minimum Essential Amenities are required to be provided in each category of stations. The Availability of these amenities must be ensured. The list of Amenities is as under:

1. Booking Office/ Booking Facility
2. Drinking Water
3. Waiting Hall/ Shed
4. Platform Shelter or Shady Trees
5. Urinals
6. Latrines
7. Platforms
8. Lighting
9. Fans
10. Foot Over Bridges
11. Timetable and Fare-list Display

12. Clock
13. Water Cooler
14. Public Address System/ Computer based Announcement.
15. Parking-cum-Circulatory Area with Light
16. Electronic Train Indicator Board
17. Public Phone Booth
18. Standardized Signage

1. Booking Office/ Booking Facility

A booking window or booking facility is to be provided at all types of stations. The booking windows may be distributed function-wise or destination-wise by the Commercial Department. The booking offices should be specially brightened up at all the stations.

The booking windows should be so located that the circulation at the entrance or exit from the station or the waiting hall is not affected by the queues in front of the booking windows. The length of the queue can be estimated at the rate of half a meter per person waiting in the queue.

Partition between passenger and booking clerk may be provided by toughened sheet glass or clear acrylic sheet with a hole for inter-communication at suitable height above the countertop and a suitable gap between the partition and the counter for collection of fare and issue of tickets. The partition should be protected on the passenger side with steel grill.

2. Drinking Water

Drinking water facilities are to be provided at all stations.

3. **Waiting Hall/ Shed**
   Except C class stations, all stations having waiting halls or waiting sheds may be facilitated with the seating arrangements for the passenger's comfort. Seating arrangements will be provided at all stations except halt stations.
4. **Platform Shelter or Shady Trees**
   All Categories of stations need platform shelters and category.
5. **Platform Covers:**
   Depending on the climatic conditions, number of passengers and nature of traffic, platform covers should be provided. At important and suburban stations, the whole platform should be covered. Large-scale covering of platforms should be confined to
   1. Junction stations.
   2. Stations at Civil District Headquarters.
   3. Stations in cities and towns with a population of more than 1 lakh.
   4. Stations in heavy rainfall areas.
   5. Suburban stations.

a) Shady Trees on Platforms

1. The planting, protection and upkeep of the trees will be the responsibility of the Engineering Department. The Traffic Department should deal with watering plants at wayside stations wherever feasible.
2. The species and spacing of the trees should be properly decided.
3. The trees should be so planted that they do not obstruct the visibility of signals or infringe the Schedule of Dimensions or infringe the

Overhead Electric wires (Traction or General Service) or obscure the platform lights or signs.

4. If the trees are already in existence, the positioning of the new equipment should be adjusted so as to avoid cutting trees as distinct from trimming their branches.
5. It would be advantageous to provide suitable raised masonry platforms around the fully grown trees as additional seating accommodation for the passengers.

6. Urinals

Except halt station, urinal should be provided at all the stations.

7. Latrines

Latrines should be provided at stations of all categories except halt stations.

8. Platforms

Platforms are to be provided at all types of stations. Platforms may be of High level, medium level, and Rail level depending on the categories of stations. The level of platforms and the heights for various levels of platforms shall be as under:

Level	**B.G.**	**M.G**	**Category of Station**
High Level	760 mm above Rail level (840 mm above Rail Level in case of Suburban stations and stations in cutting)	405 mm above Rail Level	A1, A & C
Medium Level	455 mm above Rail Level	305 mm above Rail Level	B and D
Rail Level	At Rail Level	At Rail Level	E and F

a) Length of Platforms:

The length should be adequate to accommodate the longest train received at the station.

b) Width of Platforms:

The width should be determined based on the clearance specified in the Schedule of Dimensions. The platform width should be adequate to permit free and unhampered movement of passengers.

c) Platform Surfaces:

1. The platform surfaces should be of such material that it is dust free in dry weather and mud free in rain. At important stations, the surface of main platforms should be paved with Kota Stone or Interlocking Pavers. To keep the platform surface smooth and clean, all trollies plying at the station should be provided with rubber coated wheels.
2. In case of single face platforms, the platform surface should have a slope of 1 in 60 away from the coping up to the edge of the berm, with the berm and the slope of the platform filling being protected by turfing or pitching as considered adequate.
3. In the case of two face (island) platforms the platform surface should have a slope of 1 in 60 away from the center of the platform up to the coping on either side.

4. The ends of the platforms should be provided with ramps at a slope not steeper than 1 in 6.
5. A demarcation line should be drawn 1.8 m from the edge of platform. In an area so demarcated, trolleys shall not be allowed to enable free movement of passengers in that area.

d) Platform Fencing:

All single face platforms should be provided with suitable fencing or hedging of a height of 1.8 m with a berm of at least 600 mm beyond the fencing or the hedging.

e) Whenever platforms are extended, washable aprons, if already existing, shall also be extended simultaneously.

9. Lighting

All stations must be electrified as per the provision of Rly. Bd's Circular No. 95/Elec.(G)/109/1 dated 01/02/1995. Some provision of lighting arrangement at halt stations should also be made if trains stop at night at that station.

10. Fans

Electric Fans should be provided at all electrified stations.

11. Foot Over Bridges

Foot Over Bridges should be provided at stations where high-level platforms are available. Foot over bridges or sub-ways as

convenient and techno-economically feasible should be provided keeping in view the following factors:

12. Timetable and Fare-list Display

A display of the Timetable is provided at all categories of stations. Timetable and Fare-list should be displayed on boards or cement plaques, with or without wire netting. These should be provided at suitable places, in consultation with the Commercial Department, for posting timetable and fare-list thereon.

13. Clock

All stations should have a clock for time display at stations.

14. Water Cooler

Water coolers should be provided.

15. Public Address System/ Computer based Announcement.

A public address system/ computer-based announcement should be provided.

16. Parking-cum-Circulatory Area with Light

Parking-cum circulatory area, with lighting arrangement should be provided.

17. Electronic Train Indicator Board

Electronic train indicator boards should be provided at stations where more than one platform is available and same to be located at station entrance /concourse on Foot over bridge at landing location and on platform located appropriately to guide passengers at every stage.

18. Public Phone Booth

Public phone booths will be provided at A1 and A category stations.

19. Standardized Signage

Standard Signage will be provided at A1 category stations only.

36.4 B. Recommended Amenities

The availability of amenities at the station as per norms of Minimum Essential Amenities (MEA) as above may not be commensurate with the actual passenger traffic dealt at the station. Hence, the requirement of actual amenities based on traffic as per the norms laid down.

Provision of recommended level of amenities at stations, which is a parameter of adequacy of scale of amenities provided as per actual passenger strength has not received adequate attention. Railways should review the existing facilities vis-a-vis requirements for recommended amenities and a time bound action plan be made for augmenting shortfalls, as a thrust area.

36.5 C. Desirable Amenities

Desirable Amenities are those amenities which are considered desirable to improve customer satisfaction and interface at the station. The quantum of these amenities would depend upon the category of the station and time-to-time instructions of Railway Board.

Following are the Desirable Amenities at stations:

1. Retiring Room
2. Waiting Rooms
3. Clock Room
4. Enquiry Counter

5. NTES
6. IVRS
7. Public Address System
8. Bookstalls and other Stalls for Essential Goods
9. Water Cooler
10. Refreshment Room
11. Parking cum Circulatory Area with Light
12. Washable Apron with Jet Cleaning
13. Train Indicator Board
14. Coach Indicator Board
15. Public Phones Booth
16. Catering and Vending Stall
17. Touch Screen Enquiry System
18. Water Vending Machines
19. Signages
20. Modular Catering Stall
21. Automatic Vending Machine
22. Pay and Use Toilets on Platforms and Circulating Area
23. Computerization of Complaints
24. Cyber Café
25. Provision of ATMs (preferably with ticketing facility)
26. Provision of at least one AC VIP Lounge:
27. Food Plaza
28. Train Coach Indication System
29. CCTV for Announcement & Security
30. Coin Operated Ticket Vending Machine
31. Prepaid Taxi Service
32. Static Mobile Charging Facility
33. Face-lift of Station Building including Façade

In 2018, following amenities were categorized as recommended amenities:

- Coach guidance system (NSG 1-4, SG 1-3)
- Fly catchers in Waiting rooms, refreshment halls (NSG 1-3)
- Infant nursing cubicle in ladies waiting hall /common waiting hall (where separate waiting hall is not available. (NSG 1-5)
- Universal mobile charging points inside waiting halls.
- Platform shelters with solar panels for lighting and fans (NSG 1-4, SG 1-3, HG1)

GMs and DRMs are fully empowered to issue need-based modifications to prescribed amenities in specific cases, duly recording the justification thereof. DRMs are empowered to mobilize CSR funds for the provision of customer amenities.

36.6 D. Amenities for Physically Handicapped Passengers

Provisions of facilities for Persons with Disabilities (Divyangjan) are to be provided at all stations over Indian Railways based on the needs of travelling public and availability of funds. As per guidelines issued in 1998, short Term Facilities and Long Terms facilities have been planned at all stations (including erstwhile B category stations), beginning with Non-Suburban Group 'NSG1', 'NSG2', 'NSG3' & 'NSG 4' category stations. These guidelines were revised in 2013. As per extant instructions, short term facilities consisting of following 7 items are to be provided at all stations:

34. Provision of standard ramp with railing for barrier free entry.
35. Earmarking at least two parking lots for vehicles used by disabled persons.

36. Provision of a non-slippery walkway from parking lot to building.
37. Provision of signage of appropriate visibility.
38. Provision of at least one drinking water tap suitable for use by a disabled person.
39. Provision of at least one toilet on the ground floor.
40. "May I help You" booth.

(Detailed drawings/ guidelines for the above were laid down in RDSO's report of Nov.1998, circulated under Board's letter No. 96/LM (B)/2/404, dated 30.12.1998).

The above facilities need to be provided at all important stations and as per time-to-time instructions. The effort must be made to progressively improve these amenities. The long-term facilities comprising of following 2 items are to be provided:

1. Provision of facility for inter-platform transfer.
2. Engraving on edges of platforms.

The above facilities are planned to be taken up after the provision of short-term facilities. Regarding inter-platform transfer, provision of 1 in 12 ramps/ lifts to existing FOBs/ Subways may not be feasible as a general solution. This facility must be mainly provided through pathways at the end of platforms for divyangjan passengers, on wheelchairs (to be provided free of cost), duly escorted by coolies (on payment), as per present practice. Accordingly, pathways at platform ends, wherever not existing presently, should be provided in a time bound manner, beginning with A1 and A category stations. Moreover, these should be properly provided with pre-cast cement concrete blocks at track crossings etc. and laid to an accurate level, to ensure a smooth ride for divyangjan people in wheelchairs, without need for lifting at any stage. The other long-term facility, viz., engravings on platform edges may also be taken up progressively beginning with A1 and A category stations.

36.7 Other Important Aspects regarding customer amenities

Island platform should be treated as single platform for provision of Minimum Essential Amenities. (Circular No. 2000/LMB/2/212, dated 23.06.2000).

Following aspects should also be kept in view while up-grading amenities at the stations:

1. All toilets should be gradually converted to Pay & Use toilets as per guidelines issued under Board's letter No. 05/TGIV/10/SAN/32/Pay& Use Policy, dated. 07.06.06.
2. All the signage at the station should be standardized in terms of Railway Board's circular No. 97/TGII/39/11/Signage, dated. 11.03.99.
3. For the location of signage, a plan should be made for each station.
4. All stalls should be made modular and reduced in size as per the Board's circular no. 99/TGIV/10/P/NID, dated. 15.03.99.
5. Efforts should be made to avoid cooking activities on the platform and instead beverage vending machines and the sale of precooked and packed food should be encouraged. Effort should also be made to reduce the number of trolleys to a minimum.
6. Ban-merries should be provided at A & B class stations.
7. The number of trolleys and catering stalls under the platform shelter should be reduced to a minimum.

8. There should be an effort to reduce the stalls to the bare minimum.
9. In the circulating area, proper traffic movement flow plan should be made. Proper landscaping in the circulating area should also be developed. Wherever circulation areas are redesigned, altered, or whenever stations are congested, the possibility of providing FOB landings directly into circulating area should be examined as it decongests main platforms. There should be proper segregation of incoming and outgoing passengers, wherever considered necessary (Detailed guidelines have been issued under Board's letter No. 2005/LMB/02/267, dated 07.12.05).
10. Automatic vending machines should be encouraged to replace existing vending stalls.
11. The enquiry and Booking Offices should be specially brightened up at all the stations.
12. The illumination at the stations should be improved.
13. All unauthorized entry points into the stations irrespective of their class should be closed excepting the specified exit and entry.

36.8 Display of Available Amenities

At each station, a list shall be displayed in the station manager/ masters room showing the quantum of minimum essential amenities required to be provided for that category of stations per these guidelines, vis- a-vis, the amenities available. Details of other amenities available at the station should also be displayed.

36.9 Customer amenities available in trains

These are the amenities which must be provided in the trains. These include internal fittings such as lighting, fan, comfortable seats and toilets and external fittings like display board, reservation charts etc.

Regular upkeep of all passenger amenity items identified as per class of coaches is carried out during laid down maintenance schedules in open line as well as periodical overhauls in the Railway Workshops. Identified coaches are also subjected to a 'Mid-life' rehabilitation to restore the amenity fittings as per norms. Railways have recently added the following customer amenities in train coaches:

1. Provision of cushioned seats on General Second-Class Coaches.
2. Provision of bottle holders in non-AC Sleeper Class coaches.
3. Provision of dustbins on Non-AC Coaches.
4. Provision of mugs with chain in Non-AC Coaches.
5. Provision of health faucets in AC and Non-AC Sleeper Class coaches.
6. Provision of GPS based digital display inside coaches.

36.10 Monitoring Mechanisms of customer amenities

To ensure that the prescribed amenities in adequate number are available at the stations, the following mechanisms are in place:

1. **Service Improvement Group Inspections**: SIGs are multi-disciplinary groups comprising of supervisors of various departments available at the stations to monitor amenities and cleaning and overall upkeep of major stations. They carry out inspections of major stations. These Groups

focus on the deficiencies observed in the existing Customer amenities, Cleaning, and upkeep as well as Passenger complaints. SIGs are conducted by officers also.

2. **Passengers Amenities Committee**: Statutory organization under the Railway Board, constituted once in two years. It consists of representatives from recognized passenger associations, Consumer associations, persons of eminence, representatives of NGOs, and any other distinguished person.
3. **Passenger Services Committee:** The Passenger Services Committee (PSC) is a statutory Organization body under the Ministry of Railways (Government of India). It is tasked with grievances of passengers for the ease of railway transport in India.



RAILWAY CLAIMS AND ITS PREVENTION

37

Railway claims arise due to Loss, destruction, damage, deterioration or non-delivery of animals and goods booked by railway. The railway claims not only involve the loss of revenue to the railway, but it dents the image and public good will to the railways. The reduction in the claims bill is one of the indices of efficiency in railway working. Therefore, all officers and staff working in railway must work hard to reduce the claims as best as possible.

37.1 General responsibility of the railway administration

The responsibility of Railway Administration is defined in Section 93 of the Railways Act, 1989, which described that railway administration is responsible for the loss, destruction, damage, deterioration or non-delivery of animals or goods delivered to the administration for carriage by railway arising from any cause except the following:

a) act of God.
b) act of war.
c) act of public enemies.

d) arrest, restraint, or seizure under legal process.
e) orders or restrictions imposed by the Central Government or a State Government or by any officer or authority subordinate to the Central Government or a State Government authorized in this behalf.
f) act or omission or negligence of the consignor or the consignee or the endorsee or the agent of servant of the consignor or consignee or the endorsee.
g) natural deterioration or wastage in bulk or weight due to inherent defect, quality, or vice of the goods.
h) latent defects; and
i) fire, explosion, or any unforeseen risk. Where such loss, destruction, damage, deterioration, or non-delivery is proved to have arisen from any one or more of the aforesaid causes, the railway administration can seek protection from liability for compensation only, if the administration further proves that it has used reasonable foresight and care in the carriage of the animals or goods.

37.2 The liability of railway for claim

The Railway's liability is as given above and maintain when consignments is in transit. After termination of transit, the railways become liable only as bailee under sections 151, 152 and 161 of the Indian Contract Act and that also for a period of 7 days after the termination of transit.

If the consignment is not taken delivery of within 7 days of the termination of transit, no liability whatsoever will attach to the railway. If the consignment is at the owner's risk rate the railway

shall not be responsible as bailee unless negligence or misconduct on the part of the railway is proved.

The railways have no responsibility even that of a bailee after termination of transit in the case as under:

i. explosives and other dangerous goods.
ii. animals; and
iii. articles prescribed in Part I of Schedule II of Railways (Extent of Monetary Liability and Prescription of Percentage Charge) Rules, 1990.
iv. Perishable goods.

Further under **Section-100** of the **Railways Act,** 1989, Railway administration shall not be responsible for the loss, destruction, damage, deterioration or non-delivery of any luggage unless a railway servant has booked the luggage and given a receipt therefore and, in the case of luggage which is carried by the passenger in his charge, unless it is also proved that the loss, destruction, damage or deterioration was due to the negligence or misconduct on its part or on the part of any of its servants.

Under Section-101, Railway administration shall not be responsible for any loss or destruction of, or injuries to, any animal carried by railway arising from fright or restiveness of the animal or from overloading of wagons by the consignor.

37.3 Bailee's liability

Under Section 99 of the Railways Act, 1989, the responsibility of Railway administration after termination of transit. Transit commences as soon as the Railway receipt is issued, or the consignment is loaded. When consignment to be unloaded by the customer -

1. If unloaded within free time the transit will terminate on the expiry of the free time allowed for removal of goods from the railway premise.
2. If not unloaded within free time allowed, the transit will terminate on the expiry of free time for unloading.

Railway administration shall be responsible as a bailee under Section 151, 152 & 161 of the Indian Contract Act, 1872, for the loss, destruction, damage, deterioration, or non-delivery of any consignment up to a period of seven days after the termination of transit. Provided that where the consignment is at owner's risk rate, the railway administration shall not be responsible as a bailee for such loss, destruction, damage, deterioration, or non-delivery except on proof of negligence or misconduct on the part of the railway administration or of any of its servants.

The Claims are preferred by claimants against Railways for compensation due to any damage or loss, etc., to their commodities or themselves while consuming the services of Railways as bona-fide buyers. Railways is liable to compensate them due to the liabilities they bear being a service provider.

The office of the Chief Claims Officer (CCO) deals with all types of settlement of claims including refunds in passenger business and dealings with Railway Claims Tribunal (RCT), different courts, Consumer Forums, etc. for settling claims compensation cases.

37.4 Who Can Claim?

1. **Consignee**
   At the destination the rightful claimant who is entitled to compensation is the consignee.
2. **Endorsee**
   Endorsed consignee that is the person for whom endorsement is made in the Railway Receipt for delivering the same to him.
3. **Consignor**
   Will have to produce the authority from the consignee to receive the claim.

37.5 Railway Claim Settlement:

1. **Claim for compensation**- Should be made to booking Railway, destination Railway, or the Railway on which loss, damage or partial shortage has taken place.
2. **Place of Claim Settlement**
   Claim settlement is always done in **destination railway.**
3. **Filing of Claims** – Claim must be filed either with General Manager, Chief Commercial Manager, Chief Claims Officer of the concerned Railway or at station goods shed or parcel office.
4. **Time limit for filing claim-** Claim should be filed within 6 months from the date of booking of goods or animals or else Claim becomes Time barred (generally not entertained). The General Managers of zonal railways are, however, empowered to settle time-barred cases at their discretion after satisfying themselves about the reasonableness of late filing of claims.
5. **Suit-Barred**- A claims case which becomes three years old is termed as suit-barred and thus, no suit can be filed against the railways for want of relevant documents (not accompanying the claims notice), or for want of some clarification from the party, etc. after which the claim is normally repudiated. The General Managers of zonal railways enjoy the discretionary powers for waiver of suit-bar aspect.
6. **False Claims**- Under Section 149 of the Railways Act, 1989 if any person requiring compensation from a railway administration for loss, destruction, damage, deterioration or non-delivery of any consignment makes a claim which is false or which he knows or believes to be false or does not believe to be true, he shall be punishable with imprisonment

for a term which may extend to three years, or with fine, or with both.

7. **Compensation of accident claims**- Application to be submitted within 1 year of the occurrence of the accident/incidence. No liability in the case of collision between trains and road vehicles at level crossings in which railway passengers are not involved and cases of persons run over by the trains. However, in such cases damages can be sought under the Law of Torts.

37.6 Organizational Set-Up of Claims Organization:

Each Zonal Railway has a regular Claims Settling Office headed by a Chief Claims Officer to deal with claims for compensation and each officer has been assigned the Monetary Limit to settle claims. There are railways where claim work is not substantial than the responsibility of Chief Claim Officer is assigned to any Head of the department in commercial department and preferably to Chief Commercial Manager, Freight Services or Freight Marketing (CCM/ FS or CCM/FM). The monetary limit of deciding the compensation is as under and keep changing with time.

Authority	**Monetary Limit (Rs.)**
General Manager	Unlimited
CCM (PHOD/CHOD)	4,00,000/-
CCO/CCM (HOD)	2,00,000/- 4,00,000/- for compensation claims)
Dy CCM/CCO	60,000/-
SCM	15,000/-
ACM	8,000/-

37.7 Compensation for train accidents/untoward incidents:

All bona-fide passengers are required to be compensated against their claims for any injury or death occurring to them. Two sections, 124 and 124-A of the Railways Act, 1989 illustrate the details regarding this.

Section 124	If a passenger suffers any injury or loss of life due to train accident Railway Administration is liable to pay compensation to such passenger. The amount of the compensation is to be fixed by the Government of India.
Section 124 A	Includes responsibility of Railways in case of untoward incidence (U/I) causing injury – simple or grievous.

Indian Railways have insured every rail passenger against her/his death or injury in train accidents as defined under section 124 of the Railway Act, 1989. Similarly, every rail passenger and platform ticket holder is also insured against death or injury on account of 'untoward incident' as defined under Section 124-A of the Act, such as death / injury on account of commission of a terrorist act, violent attack, robbery, rioting, shoot out, arson by any person in or on any train carrying passengers or in the waiting hall, cloak room, reservation office or booking office or on any platform or in any places within precincts of a railway station or accidental falling of any passenger from a train carrying passengers.

The Railway Board circulates a list of all loss/injury, viz. death, other injury related losses, etc. against which amount of compensation is prescribed. The dependents of the dead or injured passenger or his authorized agent have to approach Railway Claims Tribunal which decides the claims. Compensation for death or permanent disability is Rs 8 lakhs. In case of injury, maximum is Rs 7.2 lakhs depending upon the gravity of injury as per the decision given by the RCT.

37.8 Non-Received (Nr) Cell

All Railways and Railway Board maintain a separate cell for dealing of non-receipt of consignment or wagon or rake and chase the same throughout the route. Such cells are called **Not Received Cells** (NR Cells). These Cell's responsibilities include tracing and connecting shipments that fail to arrive at their intended destination within reasonable transit-time. At the Railway Board,

an NR Cell is also employed to provide better monitoring. A dissatisfied client can get in touch with the NR Cell/concerned officer immediately by phone or email. However, the post-FOIS, the role of NR Cell is getting limited and only helping the parcel traffic booked at railway station.

37.9 Railway Claims Tribunal (RCT)

The Railway Claims Tribunal Act is to provide for the establishment of a Railway Claims Tribunal for inquiring into and determining claims against a Railway Administration for loss, destruction, damage, deterioration or non-delivery of animals or goods entrusted to it to be carried by railway or for the refund of fares or freight or for compensation for death or injury to passengers occurring as a result of railway accidents or untoward incidents and for matters connected therewith or incidental thereto. Although Railway Administration made a way to compensate the consignor/consignee of goods etc. and for compensation for loss of lives, yet people were not often satisfied and they went to Courts, which took very long time to decide the claims and litigation was protracted for indefinite period. Therefore, the necessity was felt to expedite the disposal of claims at the earliest, which resulted in the establishment of the Claims Tribunal, which would exclusively deal with such claims and speedily dispose of the same. As a result, the burden of Courts was reduced, and speedy relief was made available. Even the refund of fares and freight was also brought within the purview of Tribunal.

The scheme of the Act shows that it made provisions for the establishment of a Tribunal, its Benches, officers and staff, their term, eligibility, the jurisdiction, powers and authority of Tribunal, its procedure, execution of its orders and appeals. In this way, the Act is a self-contained Act, which has solved the problems of the public at large.

37.10 Aim and Objective of RCT:

The aim and objective behind creation of Railway Claim Tribunal is to decide the substantive liability of the railway administration for loss, destruction, damage, non-delivery, or deterioration of goods entrusted to them for carriage and for death or injuries or loss to a passenger in a railway accident or untoward incident is laid down in The Railways Act 1989.

1. The consignor/consignees and passengers or their representatives prefer claims for compensation for loss of and damage to booked goods and are not satisfied with the decisions of the railway administration, file suits in courts of law.
2. Claims for compensation for death of or injury or loss etc. to passengers in train accidents are at present settled by claims commissioners.
3. As the litigation in the courts of law and before the claims commissioners is very protracted, it has been decided to set up a specialized Tribunal for speedy adjudication of such claims. The setting up of such a claims Tribunal with Benches in different parts of the country, and with judicial and technical members, will provide much relief to the rail users by way of expeditious payment of compensation to the victims of rail accidents and to those whose goods are lost or damaged in rail-transit.
4. For death and injury in case of railway accident & untoward incident – the claimant has to file the claim directly before the Railway Claims Tribunal.
5. For loss, destruction, damage, deterioration, non-delivery of animal/goods booked by railway or for the refund of fare or freight in case the claimant is not satisfied with the relief provided by the railway administration.

37.11 Power and Authority of RCT

The Railway Claims Tribunal has the powers of a District Court and appeal against its decision lies in the High Court. It is not bound by procedure laid down by the Code of Civil Procedure, 1908 but guided by principles of natural justice. Powers and authority of RCT are as of civil courts like:

1. Summoning any person and examining on oath
2. Requiring of production of documents
3. Receiving evidence on affidavits
4. Requisitioning any public record
5. Issuing commissions for examination of witness
6. Reviewing its decision
7. Dismissing an application for default or deciding ex-party
8. Setting aside any order or dismissal or ex-party decision



BUSINESS DEVELOPMENT ACTIVITIES IN INDIAN RAILWAYS

38

Historically, IR has been the main mode of moving freight traffic in India. Almost 85% of freight traffic was transported by rail in 1950. However, this trend has seen a major reversal over the years with the growth of the trucking industry and road transport. Although the freight turnaround has been on a rise, the share of the railways in total land freight transport has come down from 39% in 2000–01 to 27% in 2017–18.2 As of 2020, the modal share of railways in the freight transportation was only 18% and road sector grabbed the largest market with 71% share. If railway must survive then we need to increase the volume of freight cargo.

38.1 Creation of Business Development Units in IR

At present Indian Railways is loading around 1600 to 1700 million tons which is not sufficient. We need to grow more aggressively than any other mode of transport to catch up with the pace of the transport market. Indian Railways has a vision to double the cargo. To do so Indian Railways has set-up Business

Development Units at Zonal and Divisional Level for Increasing Volume of Freight Being Carried by Railways with following purpose:

(i) To Increase Rail Co-efficient in traditional commodities

(ii) To Increase Railways' Modal Share - especially "miscellaneous" non-bulk goods, that comprise a large volume, mostly moving by Road.

There is an urgent need to work towards doubling the freight volume being carried by Railways by 2024. This would be possible only if Railway's share is strengthened in the traditional commodities being carried and a strong foray is made into miscellaneous non-bulk goods. This is a segment in which Railways have limited knowledge and experience. However, this traffic is very large in volume and is mostly moving by road. To attract this traffic the Ministry of Railway has decided as under:

1. All GMs would set up a multi-disciplinary Business Development Unit (BDU) comprising of officers from Operating, Commercial, Finance and Mechanical Departments of SAG level at Zonal Level to be coordinated by CFTM. A similar BDU comprising of JAG level officers at the Divisional level will be set up and coordinated by Sr DOM. These groups will have frequent interaction with trade and industry to scout for and attract traffic.
2. Advertisements shall be released frequently in the local and national media to publicize the fact that such BDUs are available, and Railways is keen to attract new streams of traffic. The name and contact details of Coordinator shall be widely publicized,

3. Any proposal received shall be promptly analyzed and developed and assistance required, if any, from other Zonal Railways and Railway Board shall be immediately sought.

   Reference: Letter no. 2020/TT-IV/2/1 dated 1.7.2020 is issued and signed by S. K. Mishra, Addl. Member (Traffic), Railway Board.

38.2 Launch of Freight Business Development Portal

Indian Railways has also launched the portal for Freight Business Development on 05.10.2021 and focus was to ease the business with railways. The features of portal are as under:

1. Easy to Register
2. Professional Support
3. Advanced Services for Customers
4. Convenient Tools & Services
5. Commodity Information Pages
6. Welcoming Logistics Partners

It is a paradigm shift and dedicated portal is first of its kind and ensures that the railways freight business must be-

1. customer centric operations
2. reduce the costs for logistics providers**,**
3. provide online tracking facility for suppliers and simplify the process of goods transportation**.**

The Freight Business Development Portal is a "One Stop – Single Window" solution for all the needs of Freight customers. The purpose behind this portal is to ensure that customer must feel ease of doing business with Railways. The portal aims to provide ease of doing business, to bring **more transparency** and to provide professional support.

Indian Railways is the backbone of the country's logistics sector. During 2020, when most of the activities were under lockdown, Indian Railways was providing relentless services in Freight transportation in the country. Indian Railways achieved highest

ever loading continuously in Sept, Oct, Nov, and Dec 2020. The 'Customer-First' Principle is based on following principles-

1. Track Consignment Online
2. Smart Freight Calculator
3. Single Click Applications for Various Services

Indian Railways has embraced a **"Freight on Priority" policy** by pushing for an aggressive customer-centric approach to expand the freight carried not only from the traditional segments but also by attracting new customers to its fold.

Freight Business Development portal has been designed to replace physical processes with online ones to minimize the need of human-to-human interaction. The Portal has been specially designed and developed keeping in mind the varied needs of all existing as well as new customers with focus on ease of doing business, to bring more transparency and to provide professional support.

38.3 Benefits to the Customers

The Portal has been specially designed and developed keeping in mind the varied needs of all existing as well as new customers with focus on ease of doing business, to bring more transparency and to provide professional support. The distinguishing features of the Portal are as below:

a) **New to Rail**

This portal welcomes all the prospective customers of Indian Railways, introducing our freight business and listing various benefits, guiding them to search the most suitable terminal with detail of various terminal facilities and logistics services available, assisting them to choose the right wagon, presenting the expected charges and estimated time for their planned freight transportation. A new customer can register on

this portal and place demand for wagons in the most convenient way.

b) Existing Customers

Our prestigious freight customers are our most valuable assets, we're committed to offer them the best-in-class services, the personalization and vital information that plays a key role in their business developments, sustenance and expansions. The personalized dashboard of Freight Business Portal shall bring you the single view, which gives you access to your entire business with Indian Railways, your outstanding indents, on-run consignments, status of various interactions, facility to apply for various services and raising concerns. Live Track your on-run consignments through our GIS views, single click applications for various services: discount schemes, diversion, rebooking, demurrage and wharfage waivers, stacking permissions and many more. Get to know about rake allotments and pendency/maturity of indents at various freight terminals.

c) Commodity Pages

The portal has commodity pages on major commodities transported by Railways: Coal, Minerals and Ores, Food Grain, Flour & Pulses, Cement & Clinker, Chemical Manure, Iron and Steel, Petroleum products, Container services, Automobile and more.

One can find most suitable terminals, suitable wagon, freight charges, expected transit time and incentive schemes for a selected commodity, that handle your commodity near you, in your district or state. Introducing you with different types of wagons that carry your commodity and their loading preferences, presenting variety of incentive schemes to facilitate

your logistics requirements and flexibility of two-point loadings/unloadings.

d) Tools and Services

Your business is of utmost importance for us, we value your time and are committed to offer you the frequently accessed tools and services to provide direct access to vital information.

Get access to various tools and services for planning your optimum freight transportation with Indian Railways. Our rate slabs for various commodity movements, wagon catalogue, terminal selector, smart calculator and track & trace. Information on various important services like timetabled movements, mini rake services and approved two-point rake combinations are just a click away now.

e) Logistics Partners

Indian Railways invites and welcomes the partnerships in Indian Railways freight operations across the country. You may join our network through investments in Private Sidings, Private Freight Terminals or Railways Owned Goods Sheds to make railways, a part of your supply chain. Investments in rolling stock could fetch your numerous benefits like assured availability and incentives in freight charges. We invite aggregators, truckers, warehouse owners and labour providers to offer their services for our 9000+ freight customers at 4000+ freight terminals.

f) Professional Support

Indian Railways is always committed to provide professional support to our valued customers. The customers can contact Indian Railway officials on phone or in writing. The customers can send their suggestion, query or complaint to Indian Railways through contact us option. For every request received in writing, a unique request ID is sent to the customer

to track the status of the request. Indian Railways will be happy to serve queries of the customers.

It needs to be appreciated that though IR has a high level of fixed costs, revenue remains a direct function of NTKMs. IR can thus sharply increase its network's surplus with little incremental costs by maximizing asset utilization to increase traffic transportation.

The BDUs would have to play a very important role given the highly competitive transportation / logistics market space and if the dwindling rail co-efficient is to be reversed so as to achieve 3 billion tonnes by 2027. They have a significant role to play in the crucial task of tapping growth potential of non-traditional as well as incremental traffic. IR can no longer take its monopoly status for granted.

It has been decided that in supersession to any other instructions / practice being applied and in order to bring uniformity across all BDUs, henceforth following instructions would govern:

1. Rating / Concession / BDU proposals would be formulated by applying IR's Freight Unit Expense per NTKM with commensurate escalation factor to bring costs to the level of year in consideration.
2. BDU's effectiveness requires de-layered working and, BDUs at all levels would decide on business proposals within 7-days of the receipt of such proposals.
3. Divisional BDUs would submit their report through the DRM to Zonal BDU.
4. A strong monitoring mechanism should be put in place to track the output of BDUs at all levels. BDU proposals referred here should quantitatively fulfil objectives as laid down in policy.
5. Zonal BDUs would submit recommendations direct to the GM who may refer the recommendations to Rly Board. MCDOs of the GMs and concerned PHODs would reflect the status.

It may be generally kept in view that costing is not alone the final determinant and rather important parameters like competing demand for that type of wagon stock, line-capacity, better turn-around and optimum economic opportunities often govern pragmatic business decisions to maximise output out of sunk investments in assets (track-infra & rolling stock).

38.4 Business Development Efforts by Freight reforms in Indian Railways

For reducing logistic Costs of Customers and Capturing Market Share (Tariff and Non-tariff Measures), Some of the important Tariff reforms undertaken to reduce transportation cost:

1. **Liberalized Automatic Freight Rebate Policy in Empty flow Directions** Loaded traffic in empty flow direction is being charged at LR1 (with certain conditions), which amounts to an average discount of 30-40%.
2. **Rationalisation of distance slab** (Apr 2015): The distance slab above 1500 km to 3500 km have been rationalised from the existing 250 km to 125 km. By this step, freight rate was reduced in the range of 3 to 5% in the distance slab which gave big relief to customers dealing with long lead traffic.
3. **Station to Station Rates-Decentralization of power** (Sep 2016): Zonal railways empowered to grant concessions upto 30% depending upon their local conditions.
4. **Discount for loading of bagged consignment in open and flat wagons** (Oct 2016): In order to garner additional volumes of traffic and revenue 20 to 40% discount was granted go loading of commodities as bagged consignment in open and flat wagons. Bag size up to 2.5 ton is allowed.
5. **Policy on Long Term Tariff Contract with key freight customers** (Mar 2017): This was issued to attract additional traffic to Railways by giving a stable tariff rate as before this various concession policies to attract/ retain traffic was short term in nature. So far, 31 LTTC agreements have been executed on different zonal Railways with

customers like TATA Steel, SAIL, RINL, Ultratech Cements, ACC, JSW etc.

6. **Levy of Busy Season Charge (BSC) Deferred** (Sep 2019): BSC levied at 15% from Oct to June, has been deferred till further advice (Except for iron ore and POL). Coal & coke and container traffic are already exempted.
7. **Short lead concession- reintroduced** (July 2020): Earlier, Short lead traffic whether moved even for a few kms was subject to charge minimum for 100 km. Discount in freight at the rate of 50%, 25% and 10% has been granted to the traffic booked upto 0-50 KM, 51-75 KM and 76-90 KM respectively except Coal & Coke and Iron ore traffic to attract short lead traffic.
8. **Concession on long lead traffic** (July 2020): To facilitate long lead traffic of Coal & Coke, Iron ore and Iron & Steel traffic, discount in freight is granted. The long lead concession has been extended to Clinker (cement) traffic also with certain conditions.
9. **Round Trip Traffic (RTT)** (Oct 2020): Incentive for customers offering traffic in both directions. The return traffic under this traffic is charged at lower of the two classes of onward vis-a-vis return traffic.
10. **Incentive to fly ash** (May 2020): Discount of 40% in freight granted to fly ash traffic booked in Open Stock; both in bagged condition as well as bulk/loose condition.
11. **Non-levy of Terminal charges at unloading point** (July 2020): The traffic booked to and from notified alternate goods shed instead of busy goods shed exempted from levy of Terminal charge of Rs. 20 per tonne for goods sheds and Private Freight Terminal (PFTs). This intends to offer efficient and faster handling of goods at less busy terminals for the benefit of customers.
12. **Long lead discount for clinker traffic** (Dec 2020): Clinker being moved above 1000kms is being offered a 20% discount for incremental NTKMs over 2019-20 in the current financial year and 25% over 2020-21 in FY 2021-22.
13. **Tapping E-commerce Business:** Though E-commerce has gained immense popularity there was hardly any business given by this segment to IR. Transportation of E-Commerce consignments through

sub-urban trains (EMU/DMU/MEMU trains) has been permitted with certain terms and conditions. As a result, around 12000 tonnes of e-commerce consignment have been loaded by IR (upto December 2020)

Apart from tariff measures, some important **non-tariff measures** were also undertaken to capture market share for Rail transportation:

1. **Mini Rake Loading distance restriction** (Mar 2016; revised further during the year): To remove restriction in transportation of non-bulk commodities due to previous policies, distance for mini rake operations enhanced from 400 km to 600 km. Due to this, average increase in loading and earnings during 2016-17 & 2017-18 was around 310% and 355% respectively as compared to 2015-16. The restriction further relaxed and now can be loaded upto 1500km with train load benefit, beyond 1500 km upto 2000 km.
2. **Freight Advance Scheme** (Jan 2020): Intended to establish long term commitments from customers, it offers tariff certainty in lieu of freight advance. Under this scheme, Railway shall accord priority in allocation of rakes within the same class to freight customers who have signed agreement.
3. **Debit/Credit system of Demurrage** (Oct 2020): Allows banking of release time of wagons by process of debit/credit. It has been permitted in case of private sidings, upto one year.
4. **Additional free time for covering wagons with Tarpaulins** (Oct 2020): To ensure pollution free transportation of loose commodities, additional free time of one hour per rake may be permitted for covering open wagons with tarpaulins during loading of loose/bulk commodity at EOL siding.

38.5 Private investment in Rolling Stock (Wagons)

Changes brought about in wagon investment policies are as follows:

Liberalized Special Freight Train Operator (LSFTO) scheme:

Aims at inducting more high-capacity and special-purpose wagons, by targeting end-users (producers or consumers) as well as transport

and logistics companies, port and land-terminal operators, warehousing companies, CTOS and wagon-leasing companies.

General Purpose Wagon Investment Scheme (GPWIS):

Launched in April 2018 to promote private investment in induction of general-purpose wagons (BCN Box, etc) by end-users, PSUs and CPSES, logistics providers etc.

Automobile Freight Train Operator policy (AFTO):

AFTO policy was modified and re-launched in Jan 2015 to bring-in private entities to induct special purpose wagons for transportation of automobiles. The policy has been further liberalized by removing the minimum net worth criteria from eligibility conditions and the response from the industry has been quite encouraging. So far, 06 AFTOS have been granted license.

The investment by private sectors in wagons generates demand for steel and engineering goods having multiplier effects on the economy. Further, since most of the wagon manufacturing in India is under private sectors (unlike coaches and locomotives) this investment fuels the growth of the private sector and contributes through capital formation in the economy.

To sustain increased level of improved transit times IR is taking the following steps:

a. Creation of Dedicated freight paths through Zero Based timetable.
b. Increasing the maximum permissible speed of freight wagons to 75Kmph for loaded and 100 Kmph for empty wagons.
c. Completion of two dedicated freight corridors by June 2022.
d. Completion of targeted supercritical and critical doubling, Multi tracking, traffic facility works.
e. Introduction of time tabled Container and parcel trains.

38.6 Reforms in Freight Terminals, Good-Shed & Parcel

Private Freight Terminal Policy (PFT): Revised Private Freight Terminal (PFT) policy was issued in June 2020 with Important changes like reimbursement of Terminal Charges to PFT owners for all traffic handled, reduction of application fee for establishing PFT from Rs. 10 lakhs to Rs. 20,000 only, etc. More than 71 PFTs have been commissioned over Indian Railways.

Private Siding policy: With a view to commission a greater number of Private Sidings, the revised policy was issued in Aug 2016. Including important changes like removing limits on co-users of Private Sidings removed, streamlining approval and construction procedure with establishment of standing Committees at Divisional and Zonal levels etc.

Development of goods-sheds through private investment: Launched in Oct 2020, it aims at developing existing goods-sheds (and commissioning new Greenfield goods-sheds) without any investment from Railways. Following steps have been taken in the parcel business.

1. Powers delegated to zones for revision of reserve price even downwardly. (June 2016)
2. Increase in duration of contract from 3 years to 5 years (June 2016)
3. Permission to lease parcel Vans in Ordinary/ Passenger trains (Sep 2019)
4. Opening of all terminals for handling of Parcel Traffic (Aug 2020)
5. Formation of dedicated teams at Zonal & Divisional Levels for dealing with Parcel related issues (Aug 2020)
6. Advance booking of Parcels upto 120 days in advance (Sep 2020)
7. 8% discount on Base freight rate of P-scale applicable on Indented Parcel Trains for composition 24+1 (Oct 2020)

Under the Kisan Rail project, announced in the budget for 2020-21, movement of vegetables, fruits and other perishables have started in a big way. First Kisan Rail was run in Aug, 2020 from Devlali to Danapur. After that 11 more routes of Kisan Rail have been operationalized across the country.

More than 7,000 Parcel Special trains have been run, transporting 6.13 lakh Tonnes of consignments. Currently, train services are operational over more than 40 routes.

Trains under the Kisan Rail scheme and time-tabled Parcel special trains have given a much-needed assurance and reliability to farmers.

38.7 Digital Enablement in Freight Business

With a focus to minimise the need of human-to-human interaction following initiatives have been taken:

1. **Electronic Registration of demand for wagons (e-RD):** Provides facility to customers to register their demands for goods electronically instead of having to visit the goods sheds physically. It is simpler, convenient, speedier, and transparent.
2. **Electronic transmission of Railway Receipt (eT-RR**): A paperless transaction system where Railway receipt is also generated and transmitted electronically to customer through Freight Operation Information System (FOIS), and even delivery of goods is given through e-surrender of eT-RR.
3. **Terminal Management System (TMS):** It provides system-based preparation of Railway Receipt for freight traffic. Two new features have been added to promote digital working- (a) Preparation and submission of online goods balance sheet and (b) System generated Money Receipt for ancillary charges e.g. Demurrage, Wharfage etc.

4. **Online interface to Freight Customers:** New Business Developmental portal launched in Jan 2021 provides all requisite information e.g. freight class and rate; position of indent/demand for each station; outstanding Indents, shortest/popular routes, terminal handling facilities; freight calculator; facility to track and trace rakes.
5. **Electronic payment system:** It enables fast, safe, efficient and transparent mode of payment for freight charges, which normally are large value transactions. In the recent past, Automobile Freight Train Operators (AFTOs) have been allowed single agreement e-payment facility with base terminal Railway.



GOOD SHEDS, SIDINGS AND FREIGHT TERMINALS

39

The declining share of IR in freight movement has been largely attributed to capacity constraints of railways to carry additional traffic. Railways have been only a bulk carrier at present and their share in a non-bulk traffic has declined to less than 5% from a healthy share of nearly 40% in the late 1980s. Lack of investments in capacity augmentation has forced railways to deliberately move towards bulk commodities.

For last 10–15 years there has been an emphasis on capacity augmentation, that is, construction of dedicated freight corridors, provision of doubling and additional lines on important routes, construction of new lines, conversion of meter-gauge and narrow-gauge systems to broad gauge under unification of gauges programme, and accelerated electrification of all important routes. There has been increased investments, especially in last 6–7 years in railways aimed at capacity augmentation, modernization of assets and enhancing safety of operation.

Railways is the key player in India's efforts towards a sustainable transport system. The railways are more energy efficient than

road. For instance, greenhouse gas (GHG) emissions from a freight train carrying 190 automobiles are 80% lower than the emissions generated by 19 trucks required as an alternative. On an average, GHG emissions from rail freight are 8 times lesser than by road and almost 7 times lesser than inland shipping.

The IR is constantly working on improving the infrastructural facilities and framing better policies to attract more freight traffic. Apart from improving route capacity to carry additional trains it is necessary to increase terminal capacity. Railways introduced Private Freight Terminal (PFT) Policy in 2010 that has been improved substantially in the subsequent years to increase the interest of private investors in developing PFTs. However, the development of PFTs has not been at expected pace. Very recently, Railways have announced major changes in their sidings and PFT policies with stated objective of increased investments in terminal development.

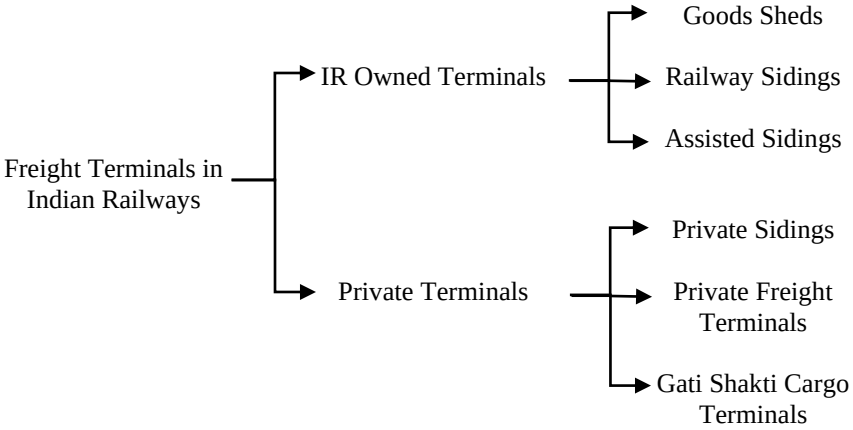
39.1 Types of Freight Terminals

Freight terminals in IR can be classified into two broad categories—terminals owned by Indian Railways and the terminals owned by private parties. The freight terminals are developed under different policies and have distinct sharing of roles and responsibilities with IR. Broadly, private terminals are categorized into private sidings and PFTs. These terminals majorly function under the Private Siding Policy and Private Freight Terminal Policy. Recently, IR has introduced two new policies on developing freight terminals with private investment, namely Development of Goods Sheds on Road-side Terminals and Gati Shakti Cargo Terminals (GCTs) in 2020 and 2021, respectively.

39.2 Presence and Share of Freight Terminals

Goods Sheds account for the highest numbers in freight terminals in India, followed by private sidings and PFTs. As the policy on goods shed development and GCT is relatively new, no freight

terminals are yet operational under these schemes. Many of the freight terminals are not operational due to decline in the demand/production, inadequate terminal facilities and shift to road transport. According to the freight data of 2019–2011, 76% of the all the freight terminals were used for movement of freight traffic. Under this study, all the terminals which handled more than 10 rakes/year were considered as operational.



Freight terminals in Indian Railways

Currently, IR is largely a bulk commodity carrier. Ninety per cent of the freight traffic is bulk traffic, coal contributing to 41% share in the total freight traffic. For railways, it is high time to expand the commodity basket, which has been discussed in more detail in National Rail Plan, 2020. Looking at the current trends of rapid growth in e-commerce market, the movement of smalls, parcels, and other non-bulk freight by railways will not only contribute to revenues of railways but will largely help in reducing current emissions. To facilitate the movement of such goods, it is crucial for IR to develop and maintain efficient goods terminals, especially those closer to consumption centers—cities.

While goods sheds have the highest share in number of freight terminals, private sidings lead the volume of traffic handled. The higher share of freight traffic at private siding is mainly due to the assured need for freight movement and efficient freight- handling systems. The PFTs also have a higher share in the freight movement as compared to that of goods sheds.

The significant gap in the share of number of goods sheds in railway systems and the freight traffic handled by goods sheds indicate underutilization of the resources developed by IR. A number of factors are responsible for smaller share of goods sheds in freight handling, major reason being unavailability of suitable infrastructure.

39.3 Sidings

Siding is a short stretch of railway track connected to a main line, used for storing rolling stock or to enable trains on the same line to pass and a short railway line giving access to the main line for freight from a factory, mine, quarry, etc. There are four types of sidings as per the ownership i.e., Private, Assisted, Departmental (Railway) and Defense (Military). The details of these sidings are given in subsequent section.

1. **Assisted sidings:** An assisted/private siding is a siding laid out to serve a Government Department factory, mill or other industrial premises other than a colliery or a mining area, under a special agreement. The cost is borne jointly by Railways and owners of the siding.
2. **Private sidings:** For the use of owners of the sidings, for which cost is borne by the owners of the sidings.
    - **a)** Private Sidings laid before PFT policy.
    - **b)** Private Freight Terminals
    - **c)** Gati Shakti Cargo Terminals
3. **Departmental (Railway) siding:** For departmental use.
4. **Military siding:** Military purpose. The criteria for locating siding mostly depend upon the bulk cargo origination or destination like industrial hubs, mineral region and ports etc.

39.4 Policies Related to Private Investment in Freight Sector by Indian Railways

Indian Railways, from time to time has introduced and updated different policies to involve the private operators in the freight business and to increase the efficiency and scale of operation.

The incorporation of private operators in handling of goods and terminal management has widely reduced the responsibilities of IR and has helped in increasing the freight business efficiency. Majorly, Private Siding Policy and PFT Policy have contributed the most in augmenting private investment.

39.4.1 Private Siding Policy, 1983

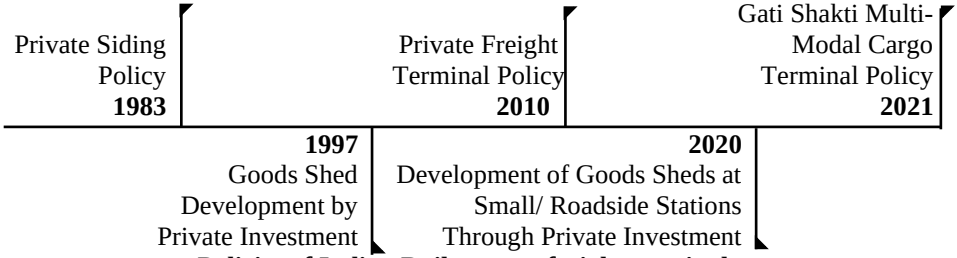
The policy on private sidings was introduced almost 40 years ago, which allows industries, public sector undertakings (PSUs) and major production units to set up their own freight terminals for movement of raw materials and finished products.

Initially, the Private Siding Policy also had the provision of railway siding and assisted sidings. The railway sidings were developed and maintained by railways on railway land only. On the contrary, assisted sidings are developed on the private land, where track infrastructure is constructed and maintained by IR and superstructure of terminal and goods-handling facilities, etc. are developed and maintained by private party. Currently, private sidings are only in operation and all new sidings are being made under Gati Shakti Cargo Terminals Policy. The features of private siding policy are as under:

1. The private parties interested in availing the railway services to their doorsteps have to procure land and develop all the required terminal and freight handling infrastructure at their own cost.
2. The common user facilities such as additional loop lines, V connections, crossing station, etc. will be provided and maintained by IR.
3. The maintenance of signalling and telecommunication (S&T) infrastructure and track infrastructure will be done by the railways and

the cost will be recovered from the siding owner.

4. Along with the freight, demurrage and stabling charges siding owners must pay siding charges also.



Policies of Indian Railways on freight terminals

The Private Siding Policy has undergone numerous changes, keeping the core of the policy intact. The major changes that are brought into the policy are regarding levy of certain cost/charges.

Several PSUs and manufacturing units have developed private sidings for the movement of their raw materials and finished products. Currently, India has around 1179 private sidings, out of which 616 and 941 are operationally active for inward and outward traffic, respectively.

Sidings contribute the largest share in freight incomes of IR. Private sidings alone handle around 75% of the total freight traffic of IR, in terms of tonnage and NTKMs.

The major reason behind the wide adoption of the Policy is the ease of freight movement from the source. The railway freight rates are more suitable and cheaper as compared to roadways for longer distances, which encourages private players to opt for railways.

39.4.2 Goods Sheds Development by Private Investment, 1997

Railway had introduced the policy for augmenting private investment for terminal development in 1997. The policy enabled the private parties to redevelop the terminal infrastructure such as full-length platform, covered shed and warehouses, goods-

handling mechanism, pucca circulation area, and basic facilities for the labourers and staff. The features of policy are as under:

1. The capital cost of terminal infrastructure development is to be borne by private party and the provision of track infrastructure would be taken care of by the Railways.
2. Freight, demurrage, wharfage, and stabling charges are levied as directed in engineering code.
3. The private developer does not get any share in freight- handling/ terminal management charges.

The policy failed to take off as no incentives were provided to the private players to recover the capital cost of infrastructure development. The policy was rolled back in 2005.

39.4.3 Private Freight Terminal Policy, 2010

PFT Policy has been launched in 2010 and aimed at enabling rapid development of freight terminals to attract more traffic to Railways. This policy enables the private parties to set up their own freight terminal on private land to facilitate the freight movement by Railways. It was thought that this policy will stimulate development of privately owned freight terminals which are not on railway land for dealing with railway traffic including parcel traffic and containers.

Initially, the policy did not allow the handling of outward loading of coal and coke of 'D' priority and outward iron ore, iron or iron ore pallet traffic, however, the later amendments have subsequently allowed the freight movement of iron, iron ore and iron ore pallet traffic. The features of policy area as under:

1. Terminal management company has to bear all the capital costs including land procurement, development of terminal and related infrastructure from the take off point.
2. The cost of common user facilities is also to be borne by TMC. The policy has provision of reimbursing the cost of common user facilities.
3. The maintenance of track and overhead equipment (OHE) inside the PFT premises is to be taken care of by TMC.

4. The freight charges, demurrage charges, and stabling charges will be levied as directed in engineering code.
5. TMC will have to bear the cost of one commercial staff per shift to carry out the railway functions.
6. TMC can charge the users for the additional facilities they are providing for freight handling.

In the duration of the last 11 years, the policy has been revised 3 times and undergone 13 amendments. The periodic changes in the policy are focused on streamlining the process of setting up PFTs. The major changes are focused on the finances of PFTs.

As of August 2021, total 73 PFTs are set up in different zones of IR and are contributing around 2% to the total freight business.

As per stakeholder interaction the success of PFTs was the reduction in the occurrences of restrictions and detentions in the divisional railways after operation of PFTs. It was emphasized that PFTs are highly efficient in freight management.

PFTs policy has seen relatively slower adoption due to number of issues in policy. The distinct constraints are discussed below, while the general issues are listed at the end of the section.

39.4.4 Development of Goods Sheds at Small/ Road-side Stations through Private Investment, 2020

The policy on Development of Goods Sheds on Road- side Terminals allows the private parties to invest in developing new goods sheds at existing railway terminals or redevelop the existing goods sheds for better functioning. The party has to develop the infrastructure for efficient loading/unloading of goods, such as covered platforms for full rake, pucca approach road and circulation area, warehousing/storage facilities, drainage, lighting and basic facilities for workers.

The facilities so developed will be common user facilities and each user will have the equal right and opportunity to access these facilities. The private party has to quote the desired share in terminal charge and terminal access charge as a reimbursement to

investment made. The selection of the developer is done through tendering system. The party demanding the lowest share in TC and TAC will be awarded the tender. The features of policy are as under:

1. The policy has provision for green field and brown field development, where in both the cases, the ownership of land and railway terminal will vest with railways.
2. The private party will bear all the cost of development, operation, and management of infrastructure facilities.
3. The provision, operation and maintenance of track infrastructure will be undertaken by IR.
4. The freight, demurrage, stabling charges, etc. will be levied as directed in the engineering code. The private party will get the share in TC and TAC.
5. The private party can use the available space for setting up canteen, advertisement facilities and generate own revenue from the same.

The policy was launched on 14 October 2020; and within one year of the launch, the policy received an encouraging response from private parties. As of July 2021, a total of 32 goods sheds had shown interest in redevelopment of goods sheds in 5 zones, of which, Letter of Acceptance (LOA) has been issued for 12 terminals.

The duration of the work contract as per policy was initially kept at five years and in January 2021 extended up to ten years which is to be decided by DRM on a case-to-case basis. This time-period is less than the efforts and cost private party is investing. This can be a demotivator for wider adoption.

39.4.5 Gati Shakti Multi-Modal Cargo Terminal Policy, 2021

The Ministry of Railways launched the new Gati Shakti Multimodal Cargo Terminal Policy on 15 December 2021 as an over-arching policy related to Private Siding Policy and Private Freight Terminal Policy. The aim of the policy is to promote the proliferation of new cargo terminals and improve existing cargo

terminals to accelerate the growth in railway's cargo traffic. The important features of this policy are as under:

1. This policy is applicable to all new PFTs and sidings, private terminals, and sidings under construction.
2. The private terminals and siding which are currently operational under the old policy can be migrated to GCT Policy if the owner wishes to do so.
3. The GCT Policy has addressed many of the issues faced by private players for developing rail freight terminals and has also brought parity between private siding and PFT.
4. The new policy has also allowed to lease railway land to private players for constructing freight terminals.
5. GCT Policy has also diluted the stringent eligibility criteria of old policies and any Indian citizen/registered company/ LLP/joint venture/partnership firms, or registered societies/trusts can apply for setting up a cargo terminal.

The Gati Shakti Cargo Terminal Operator (GCTO) can set up the terminal on private land or on railway land (to be taken on lease). The entire cost of developing terminal and freight-handling mechanism starting from land procurement is to be borne by GCTO. The cost of track infrastructure from the take-off point is to be borne by GCTO, the maintenance of the same will be taken care of by IR. The common user facilities at the serving station will be developed by IR at their own cost. Indian Railways will levy the freight, demurrage, and stabling charges as directed in engineering code. GCTO can levy suitable charges for value-added services provided.

Though GCT Policy is a good step towards bringing all privately owned freight terminals under one umbrella and has eased out many clauses of PFT and Private Siding Policy, there are still certain points which could be investigated.

NON-FARE REVENUE

40

To monetize assets of Indian Railways and undertake revenue yielding activities, Indian Railways has decided to promote new ideas and concepts for enhancement of non-fare revenue. In 2016 Non-Fare Revenue Directorate was created to focus on revenue streams from other then freight and passenger business heads. To have a successful and competitive business strategy RITES was hired by Indian Railways as a professional media market evaluation agency. RITES hired Ernst and Young for seeking suggestions. A broad list of items to be looked after by this directorate was given, which includes the following:

1. Advertisement at stations
2. Commercial exploitation of land including Station redevelopment
3. Advertisements on rolling stocks
4. Sponsorship of uniforms
5. Advertisement through hoardings on railway land alongside tracks
6. Commercial farming alongside railway track
7. Monetisation of soft assets.

8. Sidings and way leave charges.
9. Operation or licencing of Multi-Functional Complexes
10. Parking; Pay and use toilet on railway land on other than railway station.
11. Advertisements on wagons, FOBs, ROBs, RUBs, Railway Buildings etc.
12. On board and off board entertainment
13. Sponsorships of activities, events at station
14. Radio, video, Wi-Fi, internet, mobile apps etc at railway station

But considering the lack of reasonable progress, few items from above list were deleted from NFR purview since 2018, such as:

1. Commercial Development of Station and its air space
2. Sponsorship of Uniform of railway personnel
3. Commercial farming
4. Advertisement through websites
5. Siding and way leave charges.
6. Operation/Licensing of MFCs
7. Pay & use Toilets.

Further to ensure faster decision making of this directorate, it has been brought under Additional Member/Catering and Tourism in 2017. Now this directorate has renamed as Tourism Catering and NFR directorate. For better planning and execution, a detailed list of subjects for NFR Directorate was issued in 2018 (office order no 36 of 2018). Guidelines on 'New Innovative Non-Fare Revenue Ideas Scheme' (NINFRIS) have also been issued. The scheme is to be executed at the Divisional level on Zonal Railways.

40.1 Non-Fare Revenue Policies

As of now 6 major policies are working under NFR head:

1. **Out of Home** –
   It monetizes the areas along the railway track for

advertisement and revenue generation purposes.

2. **Rail Display Network-**
   It covers the station premises in such a manner that customer amenities are enhanced, and monetization is also possible.
3. **Content On Demand-**
   It is basically related to providing infotainment on board and off board in railway premises. RailTel is made nodal authority to plan and execute such contracts.
4. **Mobile Assets-**
   It offers rolling stock for advertising purposes. It is also known as Train Branding.
5. **Unsolicited NFR Proposals-**
   This policy is brought to encourage new and novice ideas by business minded people.
6. **NINFRIS-**
   This policy is brought to further simplify the implementation process to implement innovative ideas at divisional level. This is one of the most popular NFR policies and many initiatives are implemented under this policy only.

40.2 New and Innovative Non fare Revenue Ideas scheme (NINFRIS)

This is the New and Innovative Non fare Revenue Ideas scheme, popularly called NINFRIS and applicable at divisional level. Any individual can bring an innovative proposal having the potential to earn non fare revenues, for implementation in the Railways. An idea is classified as innovative if a similar proposal has not been implemented in the concerned division. Projects under the scheme should not infringe upon other NFR policies. The DRMs are given full powers to accept such offers based on the recommendations of

a three-member committee consisting of BoS from Commercial, Finance and a third department. The features of the policy are as under:

To promote new ideas and concepts for enhancement of Non-Fare Revenue and/ or improve passenger convenience on IR it has been decided by Ministry of Railways (MOR) to introduce a 'New, Innovative Non-Fare Revenue Ideas Scheme' (NINFRIS).

1.1 This policy has basically been framed to kickstart generation of NFR through innovative means and/ or brings about improvements in passenger convenience.

2.0 Applicability

2.1 The scheme shall be based at Division level. The focus of this scheme shall be on all new and innovative ideas, concepts, proposals, ideas, themes, etc., that have not been tested before and with potential to enhance non-fare revenue earnings.

2.2 To classify an idea/ concept as innovative, generally a similar proposal should not have been implemented in the concerned Division before.

3.0 Main Features of the scheme

3.1 Divisional Railway Managers (DRMs) of the Divisions shall have full powers for executing innovative ideas/ concepts for generation of NFR on their Divisions. However, projects taken up under this Scheme should not infringe upon any other Non-Fare Revenues Policies.

3.2 The Branch Officer of the Commercial Department shall be the Nodal Officer in the Division for handling such proposals.

3.3 A committee comprising Branch Officers of Commercial, Finance and department holding the assets to be used, as members, shall scrutinize the proposals received and make recommendations to DRM for approval.

3.4 For evaluation purposes, savings in expenditure, if any, likely to accrue from the project may be notionally added to the revenue potential of the project as 'deemed earnings'.

3.5 To eliminate non-serious ideas/ concepts each proposal should be accompanied by a token non-refundable application fee of Rupees one thousand only (1,000/-). Submitting an idea or concept would not give the person making the submission an exclusive right on implementation of the same. However, if the person submitting the idea also intends to implement the same, this should be clearly mentioned in the submission. Based upon the magnitude of revenue possibilities from the said proposal, DRMs are empowered to decide on the amount of earnest money deposit which shall not be less than Rupees ten thousand only (₹10,000/-).

3.6 Detailed terms and conditions for finalizing the agreement to be signed subsequent to the proposal being accepted, should be worked out within the Division by the same Committee with the approval of the DRM.

3.7 Projects may be executed directly by the Divisions, using their own manpower or through any Railway public sector/ outside agency (such as NGOs, Self Help Groups, Cooperative societies, etc.).

3.8 Such ideas which have been tested under the definitions above and have been successful should be institutionalized for which the Division shall have the power to make necessary rules and determine methods of execution based on the experience gained, subject to any rules that might already be in existence. However, after the idea takes root, its further extension/ expansion should generally be through tendering. Successful projects can be used as a method of price/rate discovery for similar projects in the future.

3.9 The tenure for such NFR initiatives shall be one year or part thereof, but can be extended by further one year, with the approval of DRM. In such cases, the license fee applicable for the extended period may be determined depending on the realization of the potential of the project.

4.0 Safeguards/ Precautions

4.1 Care should be taken that norms of aesthetics, environmental concerns, decongestion, Safety and security and free movement of passengers, all other standards of sanitation, construction (of temporary structures), fire safety, etc. as prescribed under Railway rules are not violated.

4.2 Projects undertaken should not be political or religious in nature.

4.3 No permanent structure should be constructed.

5.0 Others

5.1 Divisions and Zones are encouraged to report success of such initiatives and give wide publicity for possible replication across the Indian Railways.

Reference: Letter no. 2018/NFR/25/New Innovative Ideas scheme dated 21.05.2018 issued and signed by Smita Rawat, Executive Director, Non-Fare Revenue & Tourism.

Though NINFRIS is one of most popular and successful schemes, but many initiatives are taken under other schemes as well. Some of the ideas implemented under NFR schemes or policies are as mentioned below:

1. Display of Advertisement in Passenger Reservation System (PRS) Ticket,
2. Robotic Massage Chair with Foot Massager and Body Mass Index Machines,
3. BMI Kiosk (Body Mass Index) at various Station/Workshops,

4. Light Emitting Diode (LED) Digital Wall/Screens,
5. Reverse Osmosis (RO) Water Purification in Train Coaches,
6. Micro smarts stay Lounge,
7. Mobile Application Based Suburban Tracking System,
8. Three-Dimensional (3D) Product Displays for products & Services,
9. Mobile Tower & Small Cell units' proposal,
10. Projection Mapping Technology,
11. Vinyl Wrapping on Platform Raisers,
12. Advertisement on Pay slips,
13. Advertisement Rights on Bottle Crushing Machines,
14. Advertising in EMU Rakes through Public Information System,
15. On Board Shopping in Mail/Express Trains,
16. Exhibition at Stations, Market Contracts,
17. Promotion of Railway Ticketing App (Unreserved Ticketing System on Mobile),
18. Heritage Café,
19. Health ATM,
20. Jingles at various Stations,
21. Tex Plaza at Station and Setting up of a mobile food court at Railway Station,
22. Publicity on panel Truss and Ceiling of platform shelter,
23. Publicity rights on glass façade at Railway Station,
24. Dual display infotainment system.

In present scenario when Indian Railway is facing tough competition in passenger and freight business segment, NFR can offer a potential solution to railways.it can not only diversify the revenue resources but can also enhance the passenger experience with Indian Railways.

AMRIT BHARAT STATION SCHEME

41

It is always thought that Railway Stations must be developed, upgraded, and modernized with modern facilities. Over the years various developmental schemes viz. Model, Modern, Adarsh Station and Umbrella work Schemes have been launched over a period. These schemes were small and scattered in nature which, generally, did not involve major architectural planning to improve the overall aesthetic look of the stations.

Consequently, the Railway Board reviewed the progress of ongoing works related to Upgradation/ Modernization/ Beautification of Railway station buildings under various schemes/umbrella. As a parallel measure, it has been decided to introduce a new scheme for Major Upgradation of Railway Stations. Since the country is celebrating 75th years of Independence, the scheme is named Amrit Bharat Station Scheme.

The Ministry of Railways has formulated the policy for Major Upgradation of Railway Stations vide its letter no. 2021/Stn. Dev.-1/08/18 dated 04.05.2022 and 03.10.2022 which envisages complete redevelopment of Railway stations, creation of city centers

along with provision of Roof Plazas. While creation of city centers and Roof Plazas is the ultimate target for development of stations, it is essential that development at stations gradually moves in this direction with minimal duplication of expenditure. In view of the above, a new policy for modernization of stations named "Amrit Bharat Station Scheme" has been conceptualized. Amrit Bharat Station scheme envisages development of stations on a continuous basis with a long-term vision. It is based on Master Planning for long term and implementation of the elements of Master Plan as per the needs and patronage of the station.

41.1 Modality of scheme:

The Amrit Bharat Station scheme shall generally be executed through various umbrella works for Customer Amenities Plan Head (PH-53) sanctioned from time to time. Existing Umbrella works of PH-53 can also be used to achieve the objectives of the scheme. DRMs can phase the hiring of suitable experts at different times as per needs of the station and engaging all experts in one go is not mandatory. Works may also be planned in different stages under different umbrellas as per the needs of the Master Plan.

41.2 Broad objectives:

1. The scheme aims at preparation of Master Plans of the Railway stations and implementation of the Master Plan in phases to enhance the facilities including and beyond the Minimum Essential Amenities (MEA) and aiming for creation of Roof Plazas and city centres at the station in long run.
2. The scheme shall aim to meet the needs of the stakeholders, station usage studies as far as possible based on availability of funds and inter-se priority,
3. The scheme shall cater for introduction of new amenities as well as upgradation and replacement of existing amenities.

4. This scheme may also cover the stations where detailed techno-economic feasibility studies have been conducted or are being conducted but the work for construction of Roof Plazas has not been taken up yet, ensuring the phasing of Master Plan being suitably implemented and relocation of structures and utilities being given more emphasis in the phasing plans.

41.3 Scope of Work:

To meet the above objectives, following broad scope of work is envisaged for stations selected under the Amrit Bharat Station scheme in order to achieve the Instructions issued vide letter no. 2021/Stn. Dev.- 1/08/18 dated 04.05.2022 and 03.10.2022

1. All improvement plans shall be made with help of architects/traffic planners and/or user experience consultants as decided by DRMs. The Master Plans should have elementary details of the most appropriate location of Roof Plaza to be created in future,
2. The scheme envisages cost efficient Improvement to facades, provision of wide, well-lit aesthetically pleasing entrance porches.
3. Existing building usage should be reviewed, and space should be released in favour of passengers near the station entrances and the Railway offices should be suitably relocated.
4. The scheme aims to relocate redundant/old buildings in a cost efficient manner so that space is released for higher priority passenger related activities and future development may be carried out smoothly, Creation of new buildings should generally be avoided other than those required for relocation of old structures or relocation of structures to improve circulation or provision of structures to improve the size of waiting hails, Decision in this regard shall be taken by ORM considering all relevant factors.
5. Attempts shall be made to club different grades/types of waiting halls and provide good cafeteria/retail facilities as far as

possible. Suitable low-level partitions may be done in waiting halls if required.

6. Provision for minimum two stalls for One Station One Product shall be made.
7. Space shall also be created for Executive Lounges and places for small business meetings.
8. At least one aesthetically designed hoarding(signage) on each side of the circulating area at a prominent location shall be erected for display of important information etc. The size of such hoarding shall not be less than 10mx20m.
9. Station approaches should be improved to ensure smooth access by widening roads, removal of unwanted structures, properly designed signages, dedicated pedestrian pathways, well planned parking areas, improved lighting etc. Necessary liaison should be established with local authorities for necessary improvements to be carried out by local authorities in their areas.
10. Elements of landscaping, green patches and local art and culture should be used to create a pleasant experience for the station users. This should be done with the help of suitable professionals.
11. Second Entry Station Building and circulating area shall be improved as per the needs of the station. Wherever second entry building Is not being provided presently, space for circulating area will be well planned and a liaison shall be established with the local bodies so that approach roads for second entry are kept in the city's Master Plan and development around the station is suitably controlled.
12. High level platforms (760-840 mm) shall be provided at all categories of stations. Length of the platforms shall generally be 600m.
13. Length, location and phasing of Platform shelters shall be decided by DRM based on usage of the station. Generally,16m long bays at not more than 100 m center to center distance may be taken as a reference.

14. Ballast less tracks (BLT) should be provided on platform lines and lines with train maintenance facilities. Proposals and execution of works should be planned in suitable phases. Due care should be taken that provision of 13LT on platform lines, which are also mainlines should not lead to reduction of speed potential or cause imposition of any speed restriction in future.
15. Drainage of platform areas is of utmost importance. Special emphasis shall be given to achieve self-cleansing of drains as far as possible. Suitable cross drains, sump and pump arrangement may be provided where natural slopes are not adequate. Drains may be covered with aesthetically designed theft resistant covers.
16. Cables should be laid in aesthetically designed duct or cable trays and should have provision for future cables as well.
17. The Master Plan shall mark the space for Parcel handling spurs, storage, and handling facilities etc. Works should also be proposed and executed in suitable phases.
18. Provisions may be made such that the station provides free WIFI access to its users following all guidelines Issued by DoT. The Master Plan should have suitable spaces earmarked for 5G tower/pole mounts.
19. Material finishes of elements, such as flooring, walls, structures, furniture, sanitary fittings, etc. within the public areas of the station where surfaces either come in direct physical contact of passengers or are visible to them should be highly durable (preferably washable), generally dustproof and need low maintenance.
20. The furniture available on Waiting halls, Platforms, Retiring Rooms, Offices shall be reviewed, and intervention planned for more comfortable and durable furniture suitable to the Railway Stations of that area. In a phased manner, it shall be planned to eliminate multi-design furniture. Released furniture etc. may be suitably utilized in other stations/locations, if deemed fit.
21. All signages/display boards Including train indication boards and coach guidance systems/boards should be positioned for

Intuitive way finding, should have good visibility and be aesthetically pleasing. Public announcement system should be designed with the help of suitable professionals to ensure quality.

22. Escalators may be provided at NSG/1-4 and SG/1-2 category stations irrespective of footfall. Mode of procurement(works/stores) may be decided by DRMs. Planning for approval of GADs should be done well in advance to speed up the work of installation of escalator/lift and optimize the overall time schedule of commissioning.
23. Amenities for Divyangjan at stations shall be as per guidelines issued by Railway Board from time to time.
24. Ceremonial flags may be provided at appropriate space in the station.
25. At least two station name boards should be LED based with good visibility for the passengers of trains passing through the station.
26. Circulating area boundary wall normally should not block the view of the station from outside. Access may be controlled by Iron/steel grill fencing.
27. Sufficient number of toilets shall be provided at all categories of stations with separate provisions for women and Divyangjan. Location of toilets should be appropriate to station usage, easily visible and accessible.
28. Gradual shift to sustainable and environmentally friendly solutions as per availability of funds and condition of existing assets.
29. Illumination levels specified vide Railway Board's letter no. 2008/Elect(G)/172/1 dated 08.03.2019 for the then Al and A category stations shall be applicable for Amrit Bharat Stations (Annexure-I). To further improve the overall look of a station through facade lighting, the Railways can decide on their own type of facade lighting based upon the layout of a particular station.

30. CCTV surveillance system along with panic button at various locations in the Stations to be provided in consultation with security branch.
31. Any other item as considered necessary by DRM/GM.

41.4 Scale of amenities

The scale of amenities and facilities to be provided shall be finalized based on the broad guiding principles given above, footfall at the station, stakeholder consultations including users, different departments, and local authorities and with approval of DRM.

41.5 Selection of station

It may be done based on suggestion of a committee comprising Sr DEN/Co, Sr DCM, and Sr DFM with the approval of DRM, and as per the instructions given by Railway Board from time to time.

Reference: Letter no. 2022/GS/Stn. Dev.-I/08/70, dated 23.12.2022 is issued and signed by Rakesh Choudhary, Executive Director (SD & Trans.), Railway Board.

The Railway Board has decided that Phase -1 of the stations identified under Amrit Bharat Station Scheme should be completed preferably by end of FY 2023-24. Important points to be considered in Phase-1 are mentioned below, which may be planned as per necessity of individual station:

1. Improvement to Traffic circulation and beautification of circulating area.
2. Entrance porches (work done at Khurda Road station may be referred)
3. High Level Platforms, Cover over Platforms
4. Improvement to facade & elevation
5. Improvement to interiors, waiting halls etc.
6. Improvement to toilets (work done at Bhubaneshwar station may be referred)
7. Good quality durable Furniture

8. 12 m wide central Foot Over Bridge along with ramps (as per RDSO drawings)

Improvement to the second entry including station buildings (wherever such buildings are feasible and do not exist presently), may be planned with a reasonable time frame, keeping in view station specific requirements.

In order to ensure a high level of due diligence, DRMs should visit the nominated stations along with concerned officers and finalize the scope of work, the estimates may be prepared accordingly, and tenders invited. DRMs may like to include other items as per the extant policy already circulated.

The Phase-1 works shall be sanctioned under respective umbrellas for the identified items. Works for which provisions are not otherwise available in existing Umbrella, may be planned under the Umbrella for Soft Upgrades at the stations.

The preparation of Master Plans and detailed drawings by consultants may continue as a parallel exercise duly taking into account the tenders already invited, if any. Photographs of the existing condition of stations and works in progress may be maintained meticulously in a chronological order.

Zonal Railways has also been asked to plan centralized fabrication of FOB and ramp elements to ensure quality and completion of the project in time.

Uniform signage is to be provided at all the stations covered under Amrit Bharat scheme on the pattern of signage at Chhatrapati Shivaji Terminus (CSMT) station. For uniformity these may be provided by a common tender at Divisional or Zonal level covering all the identified stations in the Division or Zone.

IT APPLICATIONS IN COMMERCIAL DEPARTMENT

42

42.1 Passenger Reservation System (PRS)

Computerization of Railway reservation has been a success story for Indian Railways. Passenger Reservation System is the world's largest online Railway reservation system that has been developed, implemented, and maintained by Centre for Railway Information Systems (CRIS). It has greatly help in better passenger convenience and transparency in Indian Railway reserved ticket booking system. With implementation of PRS, Indian Railways had ensured-

1. Reservation system for the world's second largest populous country.
2. Anywhere to anywhere ticket booking across the country.
3. Multiple delivery channels - Counters, e-ticketing, etc.
4. Hassle free reservation services during peak hours.

Leveraging the state-of-art technological solutions to bring about better passenger convenience and more transparency in Indian Railway reserved ticket booking system.

Goal of PRS

1. Transparent Modern Technology based Reserved ticket booking system.
2. Analytics and AI based fraud detection.
3. Efficient utilization of available assets and services.
4. Improve ticket distribution efficiency and earnings of Indian Railways.

Objective of PRS:

1. Transparent Modern Technology based Reserved ticket booking system.
2. Analytics and AI based fraud detection.
3. Efficient utilization of available assets and services.
4. Improve ticket distribution efficiency and earnings of Indian Railways.

Function of PRS:

The main function of the PRS window is to help the passengers to book train tickets in advance, making the passenger's journey easy and comfortable. The PRS counters located at the railway junction tend a requisition form to fill up the details of the passenger and facilitate computerized reservation based on the provided information.

The features of PRS

1. CONCERT (Country-wide Network for Computerized Enhanced reservation and Ticketing)
2. Next Generation e-Ticketing (NGeT)
3. Reservation Charts
4. Mobile App
5. Passenger Reservation Information Management Enhanced System (PRIMES)
6. PRS Data Warehouse
7. GUIDBA
8. Data Analytics
9. Waitlist Prediction

1. **CONCERT (Country-wide Network for Computerized Enhanced reservation and Ticketing)**
   CONCERT (Country-wide Network for Computerized Enhanced reservation and Ticketing) is a mission critical Online Transaction Processing Application based on a distributed database model. It has been implemented using 3 tier Client Server architecture with 4 data centers at New Delhi, Mumbai, Kolkata, and Chennai. These data centers provide access to end user terminal locations in their respective geographical territory. Besides other ICT infrastructure, each of these data centers hosts databases for trains belonging to the Railway zones that come under the specific data center.
2. **Next Generation e-Ticketing (NGeT)**
   The Next Generation e-Ticketing (NGeT) System has brought a paradigm shift in online rail reservation service simplifying day to day life of millions of citizens, Railway being one of the most popular transport mediums and lifeline of our country. This system has about 04 crore users spread all over the country and provides them with the facility of doing train berth/seat reservation from their homes/offices or through mobile phones without requiring going to the rail reservation centers.
3. **Reservation Charts**
   To enhance travel experience and to bring greater transparency for the Indian Railway passengers, the Reservation Charts are now available for public view on the internet. This will facilitate the prospective passengers in getting the information of the vacant berths available in the train after chart preparation. Complete information of vacant berths from train source as well as intermediate locations will be available to the user. Prospective customers can use the information for onboard booking of vacant berths by

TTE as per business rules. This feature is available on the web as well as the mobile version.

4. **Mobile App**
   Indian Railway's e-ticketing System is one of the most essential services running in the country today. It caters to over 10 lakhs passengers daily (comprising 57 percent of total reserved passengers) who can book Railways reserved tickets without leaving their homes/offices. To increase the ease to users, an Android & iOS based mobile app for reserved booking "IRCTC Rail Connect" has been developed to bring the power of Next Generation E-ticketing System like High Performance and Enhanced Security.
5. **Passenger Reservation Information Management Enhanced System (PRIMES)**
   Passenger Reservation Information Management Enhanced System (PRIMES) is developed with an objective of providing a one-stop destination for all types of reports to Indian Railways including MIS reports, DSS reports and analytics reports for reserved passengers, unreserved passengers, and other IT systems of Indian Railways. PRIMES is available to Railway officials with live data of PRS and some of the data of UTS. The website provides a tool to the Indian Railway officials to analyze and deep dive into the vast volume of data available with PRS with respect to passengers, utilization, and train and berth inventory details etc.
6. **PRS Data Warehouse**
   Data Warehouse system of PRS serves as Decision Support System (DSS) for Railway Managers by furnishing trend analysis for utilisation and earnings of reserved segment of passenger traffic based on historical data. There are more than 250 reports available in Data Warehouse system of

PRS which provides access to the past data of more than 10 years based on PNR records available in the system.

7. **GUIDBA**

   Database management system for PRS provides a graphical user interface to the Railway users for changes in train, fare, stations, users and terminals definitions in the database. This is a back-office application used by Railway database administration staff.

8. **Data Analytics**

   The ever-increasing demand for transportation of goods as well as the rise in passenger traffic is pushing Indian Railways to increase its capacity while managing its assets across vast network spread across the country. Given this need, the industry is focusing on effective asset utilization, improving operational efficiency, and enhancing safety and reliability. The aim and relevance of having a data analytics vertical is to move from reactive strategy to proactive strategy. Hence, the aim is to use Data Analytics in determining heavy demand routes for the purpose of planning coach augmentation in existing trains and new train planning, coach production forecasting and customer segmentation among many others on Indian Railways.

9. **Waitlist Prediction**

   One of the critical functionalities that has also been developed is Waitlist Confirmation Prediction. A new system has been developed using advanced analytics concepts of machine learning. The model is prepared using the actual PNRs of more than 2 years. A web service-based application has been developed to serve the real time Waitlist Confirmation Prediction enquiries.

The benefits of PRS

1. **Digital Transformation of Indian Railways**

   PRS system has brought about a digital transformation in the working of Indian Railways. The system enabled

computerization of complex business rules and a transparent and fully connected system for anywhere-to-anywhere ticket booking in Indian Railway

2. **Enhanced passenger experience**
   Multiplicity of end-user touch points for greater passenger convenience e.g. booking counters at Railway stations, e-ticketing website, mobile app, agents etc.
3. **Promotes Cashless ecosystem.**
   The system is capable of handling cashless transactions to promote a cashless economy. Currently, 73% of the overall transactions done in the system are cashless transactions.
4. **Automation for better utilization**
   Better utilization of train berths and facility to automatically release vacant accommodation during preparation of train charts to downstream stations.
5. **Optimized Decision Support System**
   Data Warehouse and analytical system to provide visual dashboards for top managers with access to Distilled information obtained through the system.

42.2 Unreserved Ticketing System (UTS)

UTS facilitate for challenging task of ticketing needs for unreserved journey passengers on Indian Railways network. The unreserved ticketing system began as a pilot project in August 2002 on Northern Railway. UTS on Mobile Project has been launched with paperless ticket option on 22nd April 2015. The one stop objective of UTS system is to use the latest technologies and alleviate the plight of common man who stands in long queues for ticket bookings. UTS is a challenging task to facilitate the ticketing needs of Unreserved journey passengers (Twenty-one million approx. daily) on Indian Railways network.

Objectives of UTS:

1. To provide a hassle free and convenient way of ticket issuance mechanism with added transparency and

accountability.

2. To provide a system having Centralized Change Management System and Centralized Accounting System.
3. To adopt leading technologies and serve commuters with quick ticketing experience resulting in queue size reductions.
4. To promote Digital India and Cashless Economy through Mobile ticketing, integration of e-wallets, PoS (Point of Sale) machines at Counters, Automatic Ticket Vending Machine (ATVM) etc.

Facilities provided by UTS.

1. 24*7 booking facility.
2. To deliver tickets to the remote corners of the country.
3. To provide a ticketing system for the masses (small distance travelers, daily commuters, suburban passengers, etc.).
4. To enable Railways in prompt and speedy issuance of tickets.

Goals of UTS

1. To provide a hassle free and convenient way of ticket issuance mechanism with added transparency and accountability.
2. To provide a system having Centralized Change Management System and Centralized Accounting System.
3. To adopt leading technologies and serve commuters with quick ticketing experience resulting in queue size reductions.
4. To promote Digital India and Cashless Economy through Mobile ticketing, Kiosks, integration of e-wallets, PoS(Point of Sale) machines at Counters, Automatic Ticket Vending Machine(ATVM), Cash/Coin & Smart Card Operated Ticket Vending Machine(CoTVM), etc.

The Benefits of UTS

1. Convenience

Customer convenience/choice for purchase of ticket through

different modes of Sale, reducing booking counters at stations.

2. **Self-Employment**
   Jan Sadharan Ticket Booking Sewa (JTBS) & YTSK (Yatri Ticket Suvidha Kendra) scheme. These outlets provide self-employment opportunities, and the operators are offered a commission per passenger.
3. **Scheme for agents**
   A scheme has been launched for outside parties/agents, namely Station Booking Agents (STBA) who work over UTS counters in Railway premises and get a commission based on collections.
4. **Digital Payment**
   UTS on Mobile Project has been launched for Android, Windows, and iOS phones. Payments can be made through credit/debit card and Net banking. Various e-wallets have been integrated with the App.
5. **Mobile Application**
   The mobile application covers 9120 stations (6333 stations as source). Appx. 2.34 lakhs tickets are booked daily, covering appx. 14.21 lakh passenger travel & generating revenue of appx. Rs 1.33 Crore

42.3 The features of UTS

1. UTS at Railway Counters
2. Mobile Ticketing
3. Cash-Coin & Smart Card operated ticket vending machine (CoTVM)
4. Jan Sadharan Ticket Booking Sewa (JTBS)
5. Yatri Ticket Suvidha Kendra (YTSK)
6. Automatic Ticket Vending Machines (ATVM)

1. **UTS at Railway Counters**
   The unreserved ticketing system began as a pilot project in August 2002 on Northern Railway. A precursor to this centralized ticketing system was the Self Printing Ticket

Machines (SPTMs), a standalone system that was phased out with the arrival of UTS. Initially, the central hardware architecture was supported with station level servers to ensure business continuity in the event of network failures. The booking office operator dispensed the tickets using dumb terminals and dot matrix printers.

Over the years with improved reliability of the network, a newer design came into force with the introduction of thin clients provided to the operator.

Zonal Railways are responsible for manning the UTS counters and running the services, while CRIS maintains the application and ensures continuity of business at the system level. There are nearly 100 ticket types that are sold through the system based on class of travel, concessions for senior citizens and children, concessions to other categories, and season tickets. The business rules and fares are determined by the policies of the Ministry of Railways.

2. Mobile Ticketing

UTS on Mobile Project has been launched with paperless ticket option on 22nd April 2015 for Android and Windows smart phones. Apps for iOS smart phones have also been launched on 8th Feb.2018. The App named "UTS" can be downloaded from Google Play Store, Windows Phone Store and Apple App Store.

A website named www.utsonmobile.indianrail.gov.in is available for passengers for registration and creation/recharge of R-wallet. Payments can be made through credit/debit cards and Net banking. Various e-wallets like Paytm, Mobi Kwik and Free charge have been integrated with the App. Both paperless and paper tickets can be booked.

To prevent booking of ticket in Railway premises, the Railway tracks and stipulated surrounding area are Geo-Fenced. This preventive measure is one of its kind for

ticketing in India to prevent booking of tickets on seeing TTE/TC at platform or in train.

This prevents revenue leakage. Currently, the mobile application has been proliferated at Pan India level. Journey, platform, and season tickets can be booked through this App. Currently, inter-zonal mobile ticketing is also enabled in all zones.

3. **Cash-Coin & Smart Card operated ticket vending machine (CoTVM)**

   To prevent standing in queues at counters and to promote self-service based quick dispensing of tickets, the concept of Cash-Coin & Smart Card operated ticket vending machine (CoTVM) had evolved. These kiosks are operational across 9 Zonal Railways viz. NR, CR, WR, SR, SWR, SCR, ER, SER and SECR.

   The CoTVM is an unmanned kiosk which is operated by passengers themselves. It has the feature of issuing Journey tickets & Platform tickets and renewing Season tickets. It can also be used to recharge Smart cards used in ATVMs (Automatic Ticket Vending Machines). Payment is in the form of coins, banknotes, and smart cards.

   The machine can accept specific coins of Rs.5 and Rs.10 and banknotes of Rs. 5, Rs.10, Rs.20, Rs.50 and Rs.100 of Gandhi series. The machine does not accept currency notes with Ashoka Chakra Emblem.

4. **Jan Sadharan Ticket Booking Sewa (JTBS)**

   Ticketing services for the unreserved sector were also outsourced as per Railway Board's Jan Sadharan Ticket Booking Sewa (JTBS) scheme launched in January 2007. These outlets provide self-employment opportunities, and the operators are offered a nominal commission per passenger. The terminals at these counters connect to the central servers for issuing the tickets.

5. **Yatri Ticket Suvidha Kendra (YTSK)**
   Ticketing services for the unreserved sector were also outsourced as per Railway Board's Yatri Ticket Suvidha Kendra (YTSK) scheme launched in August 2014. These outlets provide self-employment opportunities, and the operators are offered a commission per passenger. The terminals at these counters connect to the central servers for issuing the tickets.
6. **Automatic Ticket Vending Machines (ATVM)**
   Apart from manned counters for dispensing tickets, there are also automatic ticket vending machines (ATVM) that are operated using smart cards and touch screens. This technology was first introduced in Mumbai in Oct 2007 and its success led to proliferation to other metropolitan cities. Chennai, Secunderabad, Delhi and Kolkata are the other cities where these machines are currently commissioned. Presently, ATVMs are operational across 14 Zonal Railways viz. NR, NCR, NWR, NER, CR, WR, WCR, SR, SWR, SCR, ER, SER, ECOR and SECR.

42.4 National Train Enquiry System (NTES)

At times, for reasons beyond the control of Indian Railways, the trains get delayed, rescheduled, cancelled, or diverted. It was a challenging task and needed the hour to communicate the same to commuters immediately and systematically. The principal objective of NTES system is to empower passengers and citizens by consistently disseminating near real time passenger train running information on IR in an effective, reliable, and user-friendly manner keeping in view the changing user needs and technology advancements. The National Train Enquiry System (NTES) is fulfilling the following requirements of passengers.

1. To keep the travelers informed about updated train schedules.
2. Dissemination of information to public about trains

cancelled / diverted.

3. To facilitate passengers by providing expected Trains Arrival / Departure timings at Stations.
4. To track Live Current Running status of any train on Indian Railways Network.

The Goal of NTES

1. To provide passengers complete schedule of single/all trains with all stoppages enroute.
2. To provide commuters with the expected train arrival / departure in next 2,4,6 or 8 hours at a station.
3. Facilitate information dissemination through multiple channels viz. Display Boards, Mobile Apps, Enquiry Counter, etc.
4. To keep travelers informed about live Train running status & partial / fully cancelled, route diverted trains along with end-to-end train availability.

Features of NTES

1. **Spot your Train.**
   This option provides information about a running train. Current running status and expected time of arrival/expected time of departure (ETA/ETD) at the queried station can be easily known through this query. Google Map feature has also been made available to track the running of trains on the run. Partially Cancelled routes and Diverted routes are also shown in case of such exception.
2. **Train Schedule**
   This provides the complete schedule of a given train with all its public stoppages en-route and scheduled arrival/departure at the stations, distance, and day count.
3. **Live Station**
   This option replicates the display boards at the station. One can see the trains expected to arrive/depart at any station in the next 2,4,6 or 8 hours.

4. **Trains between Stations**
   This option covers all trains defined on IR. Using this option one can find out the list of all types of trains available between any two stations.
5. **Exceptional Trains**
   This option provides information about all the exceptions in the day to day running of trains including cancelled trains (both completely or partially cancelled), rescheduled trains and their modified timings and diverted trains modified routes.
6. **Website**
   The new light weight mobile compatible web interface (enquiry.indianrail.gov.in), which offers quick and easy access to essential information for passengers, has been largely appreciated for its speed, simplicity and richness of information and enhanced user experience.
7. **Mobile App**
   First official Mobile App of Indian Railways for train enquiry was indigenously developed by CRIS for the most used mobile platforms viz. Android, Windows, and iOS.
8. **Display Board at Stations**
   Train Arrival/Departure timings, delay and platform number information is disseminated to passengers through display boards installed on platforms and station premises through NTES services.
9. **Enquiry**
   The public can do face to face enquiry at enquiry counters at stations facilitating train related information through NTES terminals or IVRS based 139 call centers.

42.5 Terminal Management System (TMS)

The Terminal Management System deals with the whole gamut of commercial transactions pertaining to the sale of freight service to all users. TMS provides on-line Railway Receipts (RRs) to the customers and has paved the way for

electronic transfer for money. At present system generated RRs are being generated/ printed and handed over to customers at all locations in Indian railways.

Features of TMS:

1. TMS relates to computerization of different activities pertaining to Goods shed working.
2. Computerized booking and delivery of consignments.
3. Station Accounting.
4. RR generation and transmission.
5. Keep an account of goods and freight between booking and destination stations through data captured in real time.
6. Link the stock demand captured and handled by RMS to wagon based booking particulars in real time to further optimize tracking of consignments and day to day supply of wagons.
7. e-payment of freight and other charges by customers to Railways' account.

42.6 Parcel Management System (PMS)

To offer state-of-art technological solutions to facilitate parcel booking activities in Indian Railways. The objective has been to implement a technology driven Parcel Management System for parcels handling in Indian Railways. The major features of PMS are as under:

1. Direct capture of parcel weight electronically
2. Universal windows for all destinations for booking
3. Single window for weighment and cash payment
4. Advance unloading guidance about inward parcel from the system at destination
5. Tracking parcel with help of barcode technology and through SMS
6. Train Master entry along with scales by Railways

The goal of PMS is as under:

1. IT enablement of Parcel booking and tracking system throughout Indian Railways.
2. Automatic calculation of undercharge, demurrage and wharfage etc. penalties or concessions.
3. Online access to General public to facilitate parcel booking activities using internet.
4. Tracking parcel with help of barcode technology and through SMS.

The advancement features of PMS

1. **Parcel Booking**
   This module covers forwarding note generation, Railways Receipt generation for Luggage, Parcel Waybills, Parcel Van Booking and Lease MR. Feeding of Railways Receipts of City booking agency and FSLA Booking for registered newspaper and magazines. After booking SMS based alerts are also sent to consignor and consignee.
2. **Barcode Printing (IR)**
   Through this utility, Printed 2D Barcode Stickers are generated from Barcode printer on a particular system generated RR no. or Non-System PWB No. This barcode contains Receipt no. along with source and destination, and is pasted on each item of consignment, which is scanned at the time of loading and unloading, thereby helping in tracking of consignment.
3. **Loading/ Unloading**
   This module covers prioritized loading of packages, advance information of packages to be unloaded at platform. Handheld Terminals are used at platform for real time updating of status of packages. After consignment is loaded/ unloaded, SMS based alerts are sent to consignor and consignee.
4. **Delivery Module**
   This module facilitates generation of delivery gate pass and automatic calculation of undercharge, demurrage, and

wharfage. After the consignment is delivered, SMS based alerts are sent to consignor and consignee.

5. **MIS Reporting**
   The MIS reporting module generates reports for daily transactions in various formats required by station, division, TA, and zonal offices.
6. **Lease e-Registration**
   Through this module, new Lease holders can register online and upload their relevant documents to participate in e-tendering of luggage compartments.
7. **e-Forwarding Note**
   The public can provide details of the parcel to be booked from internet which enables faster and accurate booking and payment at parcel offices, as details entered will be fetched into parcel application at stations.

The Benefits of PMS

1. **Ease to Customers**
   a) Track latest status of the parcel through internet and SMS.
   b) Reduction in time required for weighing and booking.
2. **Assistance to Staff**
   a) Automatic freight calculation based on the latest rules.
   b) Reduction in human errors.
3. **Benefit to customers**
   a) Loading as per priority thereby curtailing malpractices and complaints
   b) Beneficial to Accounts for internal check
   c) Reduction in Claims
   d) Potential for revenue generation based on improvement in service.

42.7 e - Auction

e - Auctions are a means of discovering market price of a commodity, whose price is otherwise not fully ascertainable by the seller.

What is the difference between auction and tender?

TENDERS	AUCTION
Sealed bids	Open bids. Bidders can see the highest current bid.
All lots end at the same time	Lots end in a staggered way
Bid cannot be changed once submitted	Bid can be increased in real time.
Discovery of value against a reserve price	Discovery of price against an estimated potential.
Reserve price is disclosed.	Earning potential is not disclosed. Thus, no bias is created in the market.
Long process of assessment and award	On the spot allotment of asset.

Auctions can be categorized in the following ways:

- **Forward Auctions:** Auctions initiated by sellers where bidders bid up the purchase price of the commodity offered for sale.
- **Reverse Auctions:** Auctions initiated by the buyer where the supplier bid in real time, driving the price down. Typically, the only point of concern here is the price and the supplier capabilities have already been confirmed.

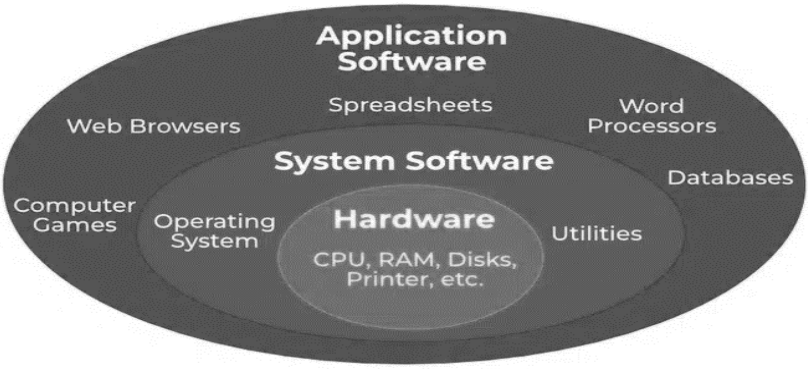
The Change brought by e-Auction

Indian Railways moved from the system of tenders for earning contracts to e-auction as there were several issues in the tendering system:

1. It was time taking. Open tender for earning contracts meant that it would take at least 30 days to allot an asset on contract. All this while, Railways lost potential revenues.
2. There was always a possibility that an open tender for an earning asset would have no bids. This information was known only on completion of the tender notice period, which would be a minimum of 21 days. Re-tendering also took time. All this while, Railways lost potential revenues.
3. The reserve price or the estimated earning potential was critical in determining the success of the tender. Since this reserve price

was put in public domain at the time of tendering, it had the impact of introducing bias in the market response to the tender. If the price was on the higher side, the tender would get no bids. In such a scenario, the administration had no way of finding out the actual market expectation of the earning potential of the asset tendered. If the reserve price was on the lower side, bids offered were only marginally higher than it, causing potential revenue losses to the Railways.

4. A tender offered only limited choice to the bidder as only one asset was tendered at a time. In case of auctioning, the entire Auction catalogue is visible to the bidders. They may optimize their bids depending on the choices they would like to bid for.
5. Auctions are more competitive than tenders. In tenders, each bidder knows only about his own bid which depends on his valuation of the asset. In an auction, the bidders are aware of the bids of other bidders. This drives up competition.
6. Provides a unified approach to all earning contracts with uniform eligibility criteria. The eligibility criteria are simplified and unified for all kinds of earning contracts. There are no technical eligibility criteria. Only a minimum annual financial turnover criterion is specified.
7. Since offerings are open for bidding pan India, it enlarges the market and allows for more bidders to bid.



COMMERCIAL STATISTICS

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The main business of railway is to manufacture and sell transport. The duty of manufacturing of transport is done by the Operating dept. and the duties of selling the transport come under the jurisdiction of commercial dept. Commercial dept. is working under direct supervision of the Chief Commercial Superintendent. This department is known as revenue earning department.

The main function of commercial dept. is to book passenger & goods traffic fixing the rates & fares, collection of revenue earned and to take steps for increasing gross earnings of railways.

Commercial statistics includes the statistics relating to the no. of passenger tonnes carried, passenger kms, tonne kms, average rate per passenger kms or tonne kms and average lead of traffic statistics regarding freight traffic and earnings by commodities are also included in this category.

To be brief commercial statistics cover the commercial aspects of railway working i.e. the volume or quantity of traffic handled which are direct sources of railway revenue such as passenger kms and tonne kms etc.

43.1 Common Terms

Following terms are commonly used in commercial statistics.

(i) Local Traffic

This refers to the traffic originating and terminating at station within the limit of that railway without passing over any other railway. In other words, transportation of such traffic confined to one zonal railway only. Earnings from such traffic will be taken as home railway earnings in case of interchange movement apportionment of earnings will be done gauge wise.

(ii) Through Traffic

It refers to transport of interchange traffic beyond the limit of a single railway only. In other words, it is the quantum of traffic, which originates on one zonal railway but terminates on another zonal railway. The transportation of such traffic confined to two or more railways. The earnings from such traffic shall be apportioned between the carrying railway proportionately on the basis of distance covered in each railway. Forwarding railway is responsible to apportion and advise to other concerned railways.

(iii) Originating Traffic

It is the quantum of traffic booked on the gauge of the railway whether it terminates or the gauge itself or on some other gauge or on another railway. In other words, such traffic commencing the booked journey on gauge or a railway for which the report is prepared.

(iv) Terminating Traffic

It is the quantum of traffic terminating on the gauge whether originated on the home line or other railway quantity of such traffic is completing the booked journey on a gauge or a railway.

(v) Cross Traffic

All traffic which neither originates nor terminates on the reporting railway or same section of the gauge but just passes over it for which the return is being prepared is known as cross traffic.

(vi) Carried Traffic

It is the quantum of traffic originating on gauge/ railway as well

as the traffic received from other gauges/ railway and also the traffic crossing the gauge or railway. The earning for such traffic is apportioned gauge wise between the carrying railways.

(vii) Revenue Earning Traffic

The traffic conveyed by rail and for which commercial tariffs are applied i.e. for transportation of which the railway is paid either by the consignor or consignee is known as revenue earning traffic. Railway earnings and consequently the profitability depend on revenue earning traffic only. It should be our constant effort to fetch more and more revenue earning traffic.

(viii) Non-Revenue Traffic

Traffic conveyed by rail for the working of the railway and for which commercial tariffs are not charged is known as non-revenue traffic. No earnings are derived from the transportation of such tariffs. For example, transport of railway coal, coke, diesel oil, stores and materials carried for its own requirement. Kit material carried free of service will come under this category.

(ix) Sub-Urban & Non-Sub-Urban Traffic

Passenger traffic moving in metropolitan areas (at present at Delhi, Bombay, Calcutta, Madras & Secunderabad) where special concessional rates for season tickets are applicable, is termed as sub-urban traffic, whereas other than sub-urban traffic is called as non-suburban traffic.

(x) Wharfage:

This is a penalty imposed on a consignee who fails to remove his consignment from the goods shed within the reasonable time. It is the ground rent charged for not removing the goods within the prescribed time. Wharfage returns are prepared on the prescribed forms and submitted to the account's office monthly.

(xi) Demurrage

This is a penalty for detaining a wagon or vehicle for loading and unloading beyond the prescribed free time. Demurrage return is prepared on the prescribed form giving details of each wagon/vehicle on which demurrage is charged. This return is submitted monthly to the Traffic Accounts Office.

(xii) Non-Issued Ticket

When a passenger wants to cancel the journey may return the ticket at the booking window. The ticket is collected from the passenger, cancelled and amount refunded as per existing rules, such cancelled ticket will be called as a now issued ticket and shown in the passenger classification.

(xiii) Index Number

The Traffic Accounts Office allots index number, for each printed ticket series available at the station. This number is mentioned on the passenger classification as it is used for feeding the data to the computer.

(xiv) Station Code List

Railway Board has allotted a station code to all the traffic booking stations. Station code is in five digits the thousandth digit indicates division, the hundred digits are for inter trade block and the last two digits are the station numbers. The station code is used for feeding the data to the computer.

(xv) Average Lead Of Traffic

This represents the average distance each passenger or tonne of goods is transported. Longer lead will give better earnings. As such the aim should be to obtain long lead of traffic. The average lead of passenger traffic is worked out by dividing the passenger kms by the no. of passengers carried. For goods traffic it is worked out by dividing net tonne kms by the no. of tonnes carried. It is worked out separately for revenue or non-revenue traffic. The knowledge of average distance is of great importance in the question of rates charged and the cost of working variation in average lead serve as a guide for budgeting earnings. This factor influences every operation of railway then other factor does.

43.2 Basic Documents

43.2.1 Booking of Passenger Traffic

When a passenger desires to travel by rail, he has to purchase a ticket. These tickets are of two types A) Printed

card ticket & B) Paper ticket

(A) Printed Card Ticket

Card tickets are issued for single journey as well as return journey and are printed class wise separately for mail/express and ordinary trains. Card tickets may be issued in favour of one, two or four passengers as the case may be. These tickets are mainly of the following kinds.

(i) Single journey ticket

This is issued to one or more passengers and is valid only for single journey. The no, of passengers on such tickets will be counted as indicated on the tickets.

(ii) Return journey ticket

This ticket is issued for outward and inward journey to one or more passengers. The no. of passengers on such tickets will be counted twice the no. of passengers permitted to travel on such tickets.

(iii) Child ticket

This is concessional ticket issued by railways to children above five years up-to twelve years of age. The no. of passengers counted on such tickets will be as one passenger per ticket.

(iv) Staff ticket(P.T.O)

Such privileges ticket is issued to railway staff on payment of one third of the fare on the basis of privilege ticket order issued by the railway administration. Staff ticket is included in concessional traffic and the counting of passengers will be as one pass per ticket issued on the PTO

(v) Check soldier ticket

This ticket is issued in exchange of military warrant to one or more passengers as well as or return journey. The number of passengers will be counted as permitted on the tickets on such tickets. The cash is not collected on such tickets, but this is sent to cash office as voucher for which the railway gets credit from the defence

ministry.

(vi) Rail cum road cum ferry cum air ticket

Such ticket is issued for the combined journey by rail and road, ferry and air. The no. of pass counted on such ticket will be as one pass per ticket. But the fare will be apportioned between rail, road, ferry and air on the basis of distance travelled.

(vii) Group ticket

Such ticket is issued on sub-urban section and is valid for more than one destination station as mentioned on the ticket. The no. of passenger on such tickets will be one pass per ticket.

(viii) Circular tour ticket

Such ticket is issued to a passenger who wants to travel in a circular route on more than one destination station. The pass has to start and terminate the journey at the same station. Circular tour ticket should be counted as single journey ticket.

(ix) Indrail pass

Indrail ticket is issued to foreign tourist in exchange of foreign currency. It is available for unrestricted travel on Indian Railways within stated period. It is taken equivalent to as many passengers as the number of days for which the ticket is available.

(x) Rajdhani Express ticket

The no. of pass on such ticket will be counted as one pass per ticket. Earnings from catering are shown separately in a footnote for each class of accommodation.

(xi) Season ticket

Season tickets are of two types, which are as follows:

(a) Monthly season ticket - It is issued to one pass for one month. No. of pass will be counted as 50 passengers per monthly season ticket.

(b) Quarterly season ticket - It is issued to one pass

for three months. The no. of passengers will be counted as 150 pass per quarterly season ticket.

(B) Paper Ticket

(i) Blank paper ticket

It is issued only for concession ticket for one passenger only.

(ii) Excess fare ticket

It is issued at stations for extension of journey and also in the train for irregular travelling. Actual no. of passengers booked are taken into account.

(iii) Standard circular journey ticket

Such ticket is prepared for standard circular journey routes. The no. of passengers on such tickets will be taken as two passenger per ticket. Such ticket can be issued for other than the standard route but will be called as circular journey ticket.

(iv) Privilege staff ticket

This is issued in exchange of PTO and will be counted as actual no. of passengers travelling.

(v) Soldier ticket

This ticket has three foils. First the record foil second is for guard and the third foil is for the passenger. It is issued in exchange of military warrant.

(vi) High officer's requisition (HOR)

This is issued to the high officers such as President of India, Prime Minister of India, Cabinet Ministers, Governors, Military Generals etc. A book consisting of 25 pages is given to the official. Each page has two portions left portion is requisition while right portion is ticket. The right portion is given to the passenger while the left portion is sent to the Traffic Accounts Officer as voucher. On such ticket, the actual no. of passengers travelling will be taken into account.

(vii) Party Ticket

When a group of passenger wants to travel in a coach

or train, there a party ticket is issued to the party. Such ticket will not be accounted for calculating number of passengers the booking of special train/coach is taken as other coaching traffic.

(viii) Passengers of railway passes

Railway staff travelling on free passes is not accounted for working out the figure of number of passengers.

i) Daily Train Cash Cum Summary Book

This is a book maintained, at all passenger booking stations, by the booking clerk. In this book the name of all stations having printed card ticket available are written in the geographical order.

Following information is available on the DTC

1. Index Number,
2. Name Of Station,
3. Rate,
4. Commencing Number
5. Closing Number of Ticket (Per Train as Per Shift),
6. Non-Used Ticket Numbers,
7. Details Of Concession Ticket Issued
8. Order and Amount of Fare Collected.

The Sale of Blank Paper Tickets Including Soldier Ticket, Special Ticket and Excess Fare Tickets Are Recorded in DTC Book, Below the Entries of Printed Card Tickets, If the Station Does Not Maintain a Separate Parcel Cash Book. Then The Details Regarding Booking of Parcel, Luggage, Motor Car, HCD And Cash Collected Therefrom Is Included In DTC.

The booking clerk workout the number of tickets issued, and the amount of fare collected for each series. The total number of tickets issued, and amount collected per shift or per train, as the case may be, is worked out.

Daily at midnight the day's total is closed. A cumulative of no. of tickets issued and amount collected is worked out of for every ten days period, i.e. for 1 to 10, 11 to 20 & 21 to last day of the month.

On completion of the month the total of these three periods are taken and a summary is prepared for the month. With the help of this monthly summary, the passenger classification for the station is prepared and submitted to Traffic Accounts Office.

ii) Passenger Classification

This return is prepared by every station monthly is compiled from DTC and sent to the Traffic Accounts Office.

Following information is available on the P.C. Return.

1. From Station
2. To Station
3. Index Number
4. Rate
5. Class
6. Type Of Ticket
7. Commencing Number of Ticket
8. Closing Number of Ticket
9. Total No. of Tickets Issued
10. Total No. of Non-Issued Tickets
11. Net Issued Tickets at Full Rate
12. Concession Fare
13. Total Amount Collected from Full Fare
14. Concession Fare
15. Total Amount.

This is an important return as it serves as the basic document for statement 6A-Pa Revenue statistics. Separate PC & are prepared local and foreign traffic and sent to Traffic Account Office. After checking &

coding in the traffic account office they are sent to the compilation office for further processing for statement 6A. Separate passenger classification is prepared for sub-urban traffic and also for blank paper tickets.

43.2.2 Booking of parcels

When a consignor wants to transport his goods by passenger train, there such goods will be booked in parcel and luggage office by producing a forwarding note to the parcel clerk. After checking the parcel is accepted and the parcel clerk prepares a railway receipt on parcel waybill book.

There are separate parcel waybill books for local and foreign traffic as also for paid and to pay traffic. Paid traffic waybill, which is pink in colour, is prepared in four foils

1. Record
2. Railway receipt
3. Accounts foil
4. Destinations waybill.

When a parcel is booked, the parcel waybill is prepared carbon process. For paid traffic. the accounts foil is taken out and sent to the account's office with the parcel waybill memo.

Parcel cash book:

There are two types of parcel cash book Paid parcel cash book & General parcel cash book. The paid parcel cash book is maintained in duplicate, while in the general parcel cash book entries of parcel received to pay, Wharfage, demurrage, HCD etc. are made. The total of these cash book is taken daily and entered in the daily train's cash cum summary book, at the end of the day.

43.2.3 Booking of luggage

Luggage means passenger's hold effects, which are required by passengers during or after the journey. A limited free allowance

is permitted on the luggage, which is carried free of charge. The extra weight than the free allowance will be charged as per existing luggage rates.

The booking of luggage is done on luggage ticket, luggage tickets are separate for local and foreign traffic. The luggage ticket is prepared and sent to the traffic accounts office, which is known as return of luggage booked.

43.2.4 Booking of Horse Carriage and Dog Traffic

A separate book is maintained at stations on which horse carriage & dogs are booked. It is also prepared in by carbon process of three foils

1. Record
2. HCD ticket
3. Guard foil.

Separate HCD return is prepared and submitted to the traffic accounts office monthly. Motor cars are also booked on prescribed rates and the returns are submitted as for the parcel traffic.

43.2.5 Wharfage, Demurrage & Its Return

1) Wharfage

This is a penalty imposed on a consignee who fails to remove his consignment from the goods shed within the reasonable time. It is the ground rent charged for not removing the goods within the prescribed time. Wharfage returns are prepared on the prescribed forms and submitted to the account's office monthly.

2) Demurrage

This is a penalty for detaining a wagon or vehicle for loading and unloading beyond the prescribed free time. Demurrage return is prepared on the prescribed form giving details of each wagon/vehicle on which demurrage is charged. This return is submitted monthly to the Traffic Accounts Office.

43.2.6 Coaching Balance Sheet

Coaching balance sheet deals with the accountal of the cash

transactions arising out of booking of passenger luggage, parcels, HCD etc. Since every railway station is dealing with public money, it is necessary that satisfactory arrangements should exist for the accountal of all transactions involving money, for the proper accounts, railway stations are required to submit the balance sheet to the account's office monthly, with necessary supporting vouchers so that the accounts office can check the transactions that has taken place and full accountal of the entries.

43.2.7 Booking of Goods Traffic

i) Goods Invoice

The acceptance of goods to be carried by the railway will initiate with the presentation of forwarding note by the consignor. After completing the acceptance formalities, the railway receipt is prepared on the invoice book.

There are separate invoice books for local & foreign traffic as also for to pay (Pink) colour) and paid (White colour) traffic. The invoice book used for local traffic i.e. destination within the railway comprises of four foils -

1. Record
2. Railway Receipt
3. Accounts
4. Destination Invoice.

In case of through traffic i.e. traffic booked to other railways each invoice has five foils. The fifth one for accompanying the consignment through to the destination. This is called the Transit Invoice.

It should be checked carefully at the destination station to see that the freight charges etc. is correctly mentioned on it.

Invoice is the copy of railway receipt and is used as a letter advising the despatch of goods with an account of description, quantity and cost of carnage. It contains the following important information: -

1. Zone & Originating gauge

2. From station/to station
3. No. Of wagons and other particulars of wagons
4. Charged via
5. Carried via
6. Sender's/consignee's name & address
7. Number & description of commodities
8. Actual weight
9. Charged weight
10. Rate
11. Freight
12. Total to pay or paid
13. Date
14. Forwarding note no.
15. Invoice no. Etc.

The invoice should be prepared & checked very carefully as it serves as the basic document for railway boards monthly statement 7C Commodity statistics.

ii) Loading, Unloading & Delivery of Goods

When a consignor wants to book a wagon load consignment he will submit an indent. A wagon will be supplied as per the ten. When the wagon is placed for loading, it must be loaded within the free time allowed for loading. After loading the wagon, it is seal and revitted and despatched to destination.

On arrival at destination, when the wagon is placed for unloading, the consignee must unload it within the allowed free time. Thereafter, the entry of the wagon contents is made in books i.e. the record is maintained for received goods traffic. The delivery of these goods will be given on presentation of the railway receipt and after obtaining signature of the consignee on delivery books.

43.3 Computer

On Indian Railways there was a heavy increase in the volume of passenger & goods traffic. Therefore, to cope up with this heavy requirement of traffic and its data maintenance it became necessary to introduce computer on Indian Railways and as such in the year 1964, the scheme of simplification of account

and mechanisation of Statistics was introduced.

Simplification of Accounts & Mechanisation of Statistics

Before 1964, the stations used to submit their returns to accounts office on received basis. But now, as per the simplified procedure the returns are prepared and forward basis.

One additional Accounts foil' is also prepared with goods invoice and paid parcel may bill which is detached and sent to accounts office every month instead of preparing the abstract.

The further processing of the accountal is mechanised and is done with the help of computer.

Now this procedure has reduced the monotonous work of preparing abstract by station and has reduced the workload at station and at account's office.

43.4 Passenger Revenue Statistics

Railway Board's monthly statement No. 6-A

This monthly statement is prepared class wise, gauge wise separately for sub-urban & non-sub-urban traffic, season & ordinary traffic. The statement should be submitted so as to reach the Rly. Bd's office within 60 days after the close of the month to which the figure relates.

The basic document for compiling this statement is the passenger classification return, blank paper ticket return, submitted by each station to the local & foreign Traffic Accounts Office

Compilation Process

At the end of each month stations prepare passenger classification which becomes the source document for this statement. The Passenger classification has all the information about the type of passenger traffic such as commencing & closing no, of tickets, index no., non-issued tickets, concession tickets, full fare tickets and amount derived there from.

These classifications are submitted through commercial

couriers separately for local & foreign traffic to local & foreign traffic accounts office. There the classification is checked in respect of:

a) Name of station from and code
b) Index no.
c) Concessional tickets issued
d) Non-issued tickets
e) Concessional fare
f) Full fare
g) Total amounts

After checking these figures, a summary for control sheet of non-issued, concessional issues, and total amount is also prepared. Then these classifications are sent to the statistical branch for further procession.

In the statistical office the classifications are tied in bundles of 500 entries each and control sheet for each station is prepared. Then the classification along with the control sheets is sent to the machine section for feeding the following information on the floppy

1) Month
2) Station fare
3) Index no.
4) Closing number of tickets
5) Commencing number of tickets
6) Non-issues
7) Concessional issues
8) Concessional fares
9) Total amount

The floppies are sent to the EDP Centre, where the information's are transferred on the tape and the tape is run on the computer. In this edit runs following checks are made:

a) Validity of station from code
b) Validity of index number
c) Duplicate index number

d) Missing classification
e) Missing entries from classification
f) Punching mistakes resulting in under charges & over-charges

After this the incorrect & unmatched statement is taken out which is sent to the traffic accounts office after making necessary corrections these statements are sent to the compilation office and then back to machine section for preparation of ARD (Addition, Revision & Deletion floppy). Then these floppies are sent back to EDP Centre.

After the rectification, one tape is created for apportionment. This tape contains foreign traffic records and local multi-gauge records. Apportionment is done on the basis of distance travelled gauge wise on the various railway involved.

Follow on tape, which is created during the apportionment run, is used for printing out tabulation of statement (6-A). Tabulation pertaining to foreign railways is sent to the concerned Rly on receipt of similar information for home railway from all the foreign railway a consolidated statement no. 6A is prepared after taking into consideration the figures of traffic and earnings derived from blank paper ticket and season tickets which are prepared manually in the compilation office.

This consolidated statement contains the information class wise for sub-urban & non-sub-urban traffic, season ticket traffic and ordinary traffic. All figures are sent for current month and corresponding month of the previous year. Cumulative figures from 1 April are also shown for current month and corresponding month of the previous year.

The following information is available in the statement:

1. No. of Passenger Originating

Means the no. of passengers booked from each gauge of the railway. A passenger taking a local return ticket on the gauge is to be treated as having originated twice but a passenger taking a return ticket to a station on another railway is to be treated as

having originated once each on the booking railway and the railway to which the return ticket is issued. Monthly season tickets are to be taken as 50 single journey tickets. Children tickets are to be treated as adult tickets. Circular journey tour tickets should be counted as single journey tickets irrespective of the distance, halts and no. of break journey in route. In case of Ind-Rail passes which are issued only to foreign tourist in exchange of foreign currency. The no. of passengers on such tickets will be equivalent to the number of days for which the tickets are issued. Passenger travelling in reserved carriages on special trains and also those travelling on passes are not to be included under this head.

2. **No. of Season Tickets Issued**
   The number is shown separately for monthly and quarterly season ticket traffic.
3. **Total no. of Passenger Carried**
   Is to include the no. of passenger originating on its gauge of the home lines as well as the no. of passengers received on the gauge from other railways or from a different gauge of the home line and also those crossing the gauge/railway. Passengers using return tickets are to be treated as having been carried twice.
4. **Passenger Kilometres**
   Are to show the total distance travelled by passengers on the home line, passenger kms are also to be calculated from passengers found travelling without tickets. No. of passenger kms are to be calculated for passengers travelling in special trains, reserved carriages and also for those carried free on passes.
5. **Passenger Earning from Passenger Carried**
   The earnings by classes & surcharge on sleeping accommodation provided in the second class should be shown separately against the head. Surcharge on travelling by certain specified trains should be included in the earnings of the respective classes. The earnings from catering in case of Rajdhani Express train is also to be shown separately in a foot

note for each class of accommodation.

6. **Number and Earnings from Passenger Carried on the System**

   Are to be shown the number of passengers carried and the earnings derived there from on the entire system of the railway i.e. for all the gauges together. Passengers passing over two or more gauges are to be counted once only. This information is to be furnished only quarterly on cumulative basis.

Objects of Compiling the Statement

1. The statements help to know the trend of traffic.
2. It is helpful in knowing the trend of earnings.
3. It helps in working out the average lead of passenger's traffic.
4. It helps in fixation of fares.

43.5 Parcel Traffic Statistics

Railway Board's Monthly Statement No. (6-8)

This is monthly statement prepared on originating basis for total all gauges. It should be submitted to board's office within 55 days of the end of the month to which figure relates.

Compilation Process

The basic document for compiling this statement is outward to play' parcels abstract and paid parcels cash book. These returns are submitted by the stations to traffic accounts office. Here figures are checked and sent to the compilation office.

In the compilation office figures of weight & earnings are consolidated for the entire zonal railways for current month and corresponding month of previous year. The cumulative figures from 1 April of each year are also sent for outward 'to play' and Paid parcels.

43.6 Goods Revenue Statistics (advance information)

Statement No. 7-A (Advance Information)

This statement deals with the no. of wagons, tonnes originating, tonne kms and earning for deleted commodity heads of revenue carried traffic. The statement is compiled on originating basis

(i.e. without any apportionment of earnings) for the railway as a whole (total all gauges).

The statement should be submitted so as to reach the Rly Bd's office on or before 16th of the following month. Great care should be taken in compiling the statement as it is the first monthly advance information for freight traffic. Separate statements are submitted for monthly and cumulative data. The figures for the statement are compiled from the invoices. A summary tape is created with the help of invoices for freight accounting. The statement is to be confined to revenue earning traffic only. Any non-mechanised revenue traffic originating on the railway should be included in this statement and also shown in a separate Annexure.

Following information is available in the statement:

(a) Tonnes Originating

This is to include tonnes of all traffic originating on each gauge whether it terminates on the gauge itself or on such other gauge of the home line or on other railway. This refers to both full wagon load and smalls. Certain commodities, which do not originate on the railways, are specifically watched to see that there is no traffic under such commodities. The tonnage shown in this statement is compared with the similar figures shown in commodity loading statement.

(b) Tonne Kilometres

This represents the net tonne kms of freight carried in goods and mixed trains (goods proportion). This refers to both wagon load & smalls.

(c) Earnings from Revenue earning goods carried

These are to show the earnings for the gauge booked under abstract 'Y' goods earning. Earnings are shown for full wagon load and smalls. These figures are compared with the figures shown in Advance statement of gross earnings & traffic handled'.

(d) No. of wagons (4-wheelers)

This represents the number of wagons loaded with commodities charged to full wagon load rates. The number of wagons is reckoned in terms of 4-wheelers and the figures are compared with that shown in commodity loading statement.

The above information's are shown for the following selected plan head commodities.

1. Coal for Steel Plants
2. Coal for Washeries
3. Coal for Thermal Power Houses
4. Coal for public House
5. Raw material for steel plants
6. Pig Iron and finished Steel for Steel Plants
7. Iron is booked for export
8. Cement
9. Foodgrain
10. Fertiliser
11. Mineral Oils
12. Balance Other Goods
13. Total Revenue Earning Traffic

The figures reported in this statement should agree with those shown in detailed computer

43.7 Goods Revenue Statistics on originating basis

STATEMENT (7-B)

This statement is prepared on originating basis gauge-wise, from the monthly summary tapes created for freight accounting. The monthly & cumulative data should reach the Rly. Bd's on or before the 20th of the following month. The cumulative statement of individual railway need be sent only every quarter, showing the cumulative for the months ending June, September, December & March.

The statement should contain the details of revenue earning traffic only. There is however no objection in giving details of non-revenue traffic to the extent it is mechanised. Any revenue

traffic, which is not mechanised, should be included in the statement and shown as a separate Annexure. Following information is available in the statement: -

A) No. of Wagons

This refers to the booking in wagon loaded. The no. of wagons in 4-wheelers is taken from the invoices.

B) Freight in Rupees

This is shown separately for smalls, fulls & total. These are to be given in units of rupees without any decimal.

C) Weight in tonnes

This is shown for smalls, fulls and total in units without any decimal.

D) Tonnes Kms

This is also shown in units for smalls, fulls and total without any decimal.

This information is given for the following detailed commodities: -

1. Products of Agriculture
2. Animals & products of animals
3. Products of Mines
4. Mineral Oils
5. Products of forests
6. Manufactures
7. Miscellaneous revenue traffic
8. Total revenue earning traffic

43.8 Commodity Statistics

STATEMENT (7-C)

This is a monthly statement and should be sent to Rly Bd's office on or before 45 days after the close of the month to which the statistics relate. This gauge-wise statements Separate statements are required to be required on the apportioned basis. submitted for monthly & cumulative data.

The source document for the statement is the goods invoice,

which is prepared by the stations, at the time of booking goods traffic. The account's foils of invoices are sent by the station to traffic accounts office. Invoices are checked manually for:

a. Charged distance
b. Classification of commodities
c. Charged rate
d. Charged weight
e. Other charges

The booking stations stamp numerical code of station from. Coding is done in the Traffic Accounts Office for the following:

a. Station to
b. Weight
c. Commodity
d. Local or foreign
e. Paid or to pay
f. Other charges

After checking and coding, the invoices are sent to the compilation office, where they are tied in bundles and a lot number is given to each bundle separately for paid and to pay. The, they are sent to the machine section. In the machine section, information from the invoices is taken on the floppies and sent to the EDP centre. At the EDP centre, the information on the floppies is transferred to the tape and run on the computer for taking out incorrect statement.

Incorrect Statement

This statement lists out the no. of RRs present/missing, invalid station from/station to, commodity codes, originating station-wise incorrect information regarding charged weight, rate, freight, calculated freight etc. Duplicate invoice numbers are also checked and corrected.

The Rate Checkers checks these incorrect statements in the Traffic Accounts Office. Then ARD Hoppies (addition, revision & deletion) are prepared in the machine section of the

compilation office and sent to EDP centre.

After these corrections are made, tape for machine prepared Abstract (MPA) is printed out. The MPAs are destination station wise and sent to the concerned stations. While the MPAs are printed out, a tape is created containing all the records having under charges/over charges, for the entire month. It is prepared destination station-wise and sent to the Traffic Accounts Office of the concerned railway for taking necessary action in raising debits or allowing refund.

After this, a summary tape is created for printing out statistical statements 1 to 6. Statements 1.2 & 3 refer to foreign railway for BG, MG & NG respectively and statements 4,5 & 6 refer to similar information for home railway. Statements 1 to 3 are sent to other zonal railways concerned. Similar statements i.e. 1 to 3 are received from other zonal railways. These along with statement 4 to 6 of home railway are run on the computer to prepare monthly statistical statement (7-C), which gives the information for all traffic dealt with by the railway during the month.

The statement contains the details of revenue & non-revenue traffic. Where-ever non- revenue traffic has not been mechanised, the data has to be compiled manually. The coverage of information in the statement for major commodities is as under:

1) **No. of Tonnes Originating**
   This is to include tonnes of all traffic originating on each gauge, whether it terminates on the gauge itself or on some other gauge of the home line or on other railway.
2) **No. of Tonnes Transhipped**
   This is to include the tonnage received on each gauge from different gauge whether terminating on or crossing the gauge for which figures are reported.

3) **No. of Tonnes Terminating**
This is to include tonnes of all traffic terminating on the gauge whether it originated on the home line or on other railway.

4) **No. of Tonnes Cross-traffic**
This is to include tonnes of all goods traffic, which neither originate nor terminate on the home line, but pass over it. Traffic originating on a different gauge of the home line to that for which the return is being prepared is to be treated as traffic from another railway.

5) **Total No. of Tonnes Carried**
This is to include tonnes originating on each gauge of the home line, as well as the number of tonnes received on the gauge from other railways, or from different gauge of the home line and also, the tonnage of traffic crossing the gauge.

6) **Net-Tonne Kilometres**
This represents the net or freight tonne kms of freight carried in goods & mixed trains (goods proportion) including net tonne kms of freight carried in departmental trains.

7) **Earnings from Revenue earning goods carried**
These are to show the earnings for the gauge booked under main heads of goods earnings

8) **Tonnes Carried on the system**
This should give the figures of tonnes carned on the railway treating all the gauges as a single system and details are to the given only in the statements for BG.

9) **Average Lead**
This is worked out by dividing the figure of Net Tonne kms by the No. of Tonnes Carried.

10) **Average Rate**
Dividing the figure of earnings by the figure of net tonne kms arrives at this result.

Commodities

A) Revenue Earning Traffic
   1) Products of Agriculture
   2) Animals & Products of animals
   3) Products of mines
   4) Products of forests
   5) Manufactures
   6) Miscellaneous
   7) Total Revenue Earning Commodities

B) Non-Revenue Traffic
   1) Railway coal & diesel oil
   2) General Stores & materials for railways
   3) Total Non-revenue Traffic

C) Total Revenue Earning & Non-earning traffic

43.9 Statement of Commodity Loadings

This statement is to show the no. of wagons loaded and the weight loaded into them at stations transhipment sheds and repacking points. A register is maintained at all stations, transhipment points & repacking sheds. In this register figures are posted daily and summarised periodically for incorporation in the statement. The statement duly filled is submitted by the stations periodically to the divisional office. Periods are 1" to 10th, 11th to 20th, and 21st to last day of the month.

In divisional office, returns received from all station's transhipment points, repacking sheds of the division are consolidated gauge wise, and submitted to compilation office periodically. In the compilation office figures are further consolidated into monthly figures gauge wise for the zonal railway and submitted to Rly. Bd.

The monthly statement containing full month's figures in all details and cumulative statement showing figures from 1" April to end of the month should be despatched so as to reach the Rly. Bd's on or before the 12th day after the close of the month.

Wagons are to be counted in terms of 4-wheelers. The statement contains following information. Commodity-wise, regarding originating loading & transhipment point loading for the current month & corresponding month of previous year.

A) In respect of originating station loading

i. No. of wagons going to destination station on the same gauge.
ii. No. of wagons going to break of gauge transhipment points.
iii. Total Originating loading (i+ii)
iv. Tonnes loaded
v. Average load per wagons loaded (iv+iii)

B) In respect of transhipment loading

i. No. of wagons loaded
ii. Tonnes loaded
iii. Average load per wagon loaded (iii)

C) Total Originating Transhipment loading

i. No. of wagons loaded A) iii + B)

In addition to this, figures of loaded wagons received from other railways, no. of wagons transhipped or repacked from same gauge to same gauge, public traffic at coaching rates. Kit & other materials booked free also included in the statement. All information regarding no. of wagons loaded are shown for the following Commodities

A) Revenue Earning Traffic

1. Products of Agriculture
2. Products of Mines
3. Minerals oils
4. Products of Forests
5. Manufactured Articles
6. Miscellaneous
7. Total Revenue earning traffic

B) Non-Revenue Traffic

1. Railway Coal. Diesel oil, materials

2. Total Non-revenue Traffic

C) Total Loading (A+B)

Following instructions should be taken into consideration while compiling the statement:

1. Separate statements are prepared for MG, BG, and NG as also for the month and cumulative.
2. Weight charged for should be taken.
3. Only number of wagons should be taken in case of loaded receipts from other Railway & number of wagons in which goods are transhipment as repacked from wagons of same gauge public traffic as coaching rates, and number of wagons for kit and other materials.
4. Wagons are to be counted in terms of wheelers.
5. Following wagons should not be accounted as fresh loading:
   a) Infringement loads adjusted on route.
   b) Seal- cut and seals missing wagons checked en route.
   c) Un connected loads detained and send on receipt of particulars
   d) Wagons loads in excess of the permissible load sent after un-loading the excess weight enroute
   e) Wagons loads diverted.
   f) Wagons loads received from weightment & despatched.
   g) Road vans received for unloading the articles for the station & send onwards with the remaining articles.
6. Wagons carrying articles from goods shed to transhipment shed for adjustment or delivery.

Object:

1. To know the loading position and to take steps to improve it.
2. To see that the maximum use of the wagons is being made
3. To work out average starting wagon load
4. To judge the requirements of stock in relation to the commodities obtained for loading
5. To know the number of wagons received from another railway.
6. To judge the efficiency of commercial staff.

CROWD MANAGEMENT AT RAILWAY STATION

44

Railway stations and trains are witnessing a manifold increase in footfall during the festive season. To tackle the challenges posed by increased footfall, Railways are always taking various measures to control and regulate crowds at Railway Stations. Some of the efforts are as under:

1. As far as possible, all efforts are being made to run trains smoothly, with prior display of platform numbers. Platforms shall not be changed. All rakes, including special trains, will be placed on the platform at least 30 minutes before the scheduled departure.
2. A proper train enquiry system and announcement system is being ensured. All train information boards will be in working condition and will show updated information.
3. Manning of escalator.
4. Regular monitoring through a dedicated WhatsApp group is being done.
5. Railway Hospitals, Railway dispensaries near Railway Station have been directed to be prepared in case of any possible untoward incident at Railway Station.

44.1 Arrangements for Crowd Management

Opening of Mini Control Room:

Mini control rooms are being set up (from 06.00 hrs to 24.00 hrs) with designated staff of Operations, Commercial, Mechanical, Engineering, Electrical, RPF and Medical at Terminal stations. These well-equipped mini-control rooms have facilities like telephone, train information, panel room connectivity, platform, and CCTV feed of the circulating area.

The officers are posted as Officers of Special Duty (OSDSDO) at stations during peak hours for overall supervision and coordination.

Additional Passenger Waiting Areas and Amenities:

At Terminal Stations, provision of tents in a circulating area with a capacity of more than 500 passengers is being made. The temporary waiting area, mobile toilets, extra water taps in front of tent area, extra reservation counters and UTS booking counters, enquiry counters, large size LCD screens for train information and public address system, stall for food and snacks and RPF help desk counters have been provided.

Medical facilities:

Posting of Doctor is from 06.00 hrs. to 24.00 hrs. Doctors are available on short notice 24 hours a day at Terminal stations as well as at all major stations. Provision of first aid posts with paramedical staff, adequate stretchers and wheelchairs at stations has been made. Availability of Ambulance at major Stations has been ensured.

Deployment of additional staff:

Deployment of additional commercial staff, RPF and RPSF, GRP personnel, civil defense volunteers and Scouts and Guides has been made to control the crowd and assist the passengers.

Inspite of all above, there are potential of injuries and casualties of people if uncontrolled rush comes to railway stations. In order to understand the crowd and its management, we need to study and appreciate certain crowd disaster in India as on next page.

Table: Important Crowd Disasters in India

S. N.		Place and Date of Disaster	Casualties
1	23.12.1995	Fire broke at a school function held in a *shamiyana* (tent) at Dabwali, Haryana	446
2	24.02.1997	Fire at a religious congregation at Baripada, Odisha.	206
3	13.06.1997	Movie goers trying to come out of a smoky cinema hall at Uphaar Cinema, Delhi.	59
4	14.01.1999	Sabarimala Stampede, Kerala.	52
5	28.09.2002	Charbaug Railway Station Stairs, Lucknow, Uttar Pradesh,	19
6	27.08.2003	Nasik Mahakumbhamela , Maharashtra	29
7	25.01.2005	Wai, Satara, Shri Kalubai Yatra Mandhardev,Maharashtra,	293
8	3.08.2008	Naina Devi temple stampede in Bilaspur, Himachal Pradesh,	162
9	30.09.2008	Chamunda Devi temple, Jodhpur, Mehrangarh Fort Rajasthan,	249
10	4.03.2010	Ramjanaki Temple, Pratapgarh, local ashram, Uttar Pradesh,	65
11	14.01.2011	Sabarimala stampede, Kerala	102
12	10.02.2013	Railway Station, Allahabad, while boarding train Uttar Pradesh (During Maha Kumbh Mela)	36
13	13.10.2013	A stampede on a bridge where a section of railings broke Madhya Pradesh at Ratangarh, Datia.	121

44.2 Causes and Triggers for Crowd Disasters

Broadly, these have been categorized into 6 categories as under: -

1. Structural
2. Fire/Electricity,
3. Crowd Control,
4. Crowd Behaviour,
5. Security
6. Lack of coordination between various stakeholders.

1. Structural

Structure collapse of

1. Barricades/ bamboo railings/wire fence/ Metal barrier

Makeshift bridge.
2. Temporary structure.
3. Railings of the bridge caused by panic triggered by rumours.
4. Barriers on the way
5. Poor guard railings, poorly lit stairwells
6. Difficult terrain (famous religious sites built on top of hills that are difficult to access)
7. Slippery/muddy roads
8. Narrow streets with illegal vendors on sides; sloped gradient; bad weather leading to crushing.
9. Windowless structure, narrow stairs
10. Narrow and very few entry/exits.
11. Absence of emergency exits.
12. Unauthorized construction surrounded by high brick walls prevents evacuation.

2. Fire/Electricity

1. Fire in a makeshift facility or a shop.
2. Cooking in a makeshift facility
3. Wooden structure/ quick burning acrylic catching fire.
4. Fire at illegal structure
5. Non-availability of fire extinguisher/fire extinguishers not in working condition
6. Unauthorized fireworks in enclosed places
7. Inappropriate points of manufacturing and sale of fireworks
8. Building and fire code violations
9. Lack of adequate flood lighting of the assembly area and the pathways used by the crowd.
10. Electricity supply failure creates panic and triggers a sudden exodus.
11. Illegal electric connections
12. Inappropriate fittings such as MCB, Aluminum wires instead of copper wires etc.
13. Short circuit from electrical generator, (synthetic) tent catching fire.
14. Elevators catching fire, people on higher floors panic, steep stair

designs.

3. Crowd Control

1. More than anticipated crowd at store/mall/political rallies/ examinations/ religious gatherings/ public celebrations
2. Underestimation of audience, staffing, services
3. People allowed in excess of holding capacity due to overselling of tickets for an event.
4. Limited holding area before the entrance
5. Lack of access control
6. Closed/locked exit.
7. Sudden opening of entry door
8. Reliance on one major exit route
9. Uncontrolled parking and movement of vehicles
10. Callous indifference in regulating traffic.
11. Lack of adequate and strong railings to marshal the queue.
12. Lack of sectoral partitions to segregate assembled crowd.
13. Lack of proper public address system to control crowd.

4. Crowd Behaviour

1. A wild rush to force the way towards entrance/exits.
2. Crowd attempting to enter a venue after the start/closing time.
3. A collision between large inward flows and outward flows
4. Rush during distribution of disaster relief supplies
5. A large number of pilgrims are trying to board a ferry for a sacred island site.
6. Free distribution of gifts /toys/ food/ Prasad/alms/ blankets/ cash/clothes triggering a surge and crush.
7. Tussle to catching a glimpse/autograph of a celebrity.
8. A large (much more than expected) anxious and competitive crowd gathering because of limited period promotional events at malls.
9. Rush to get covered/free/unnumbered seats at the venue.
10. Scramble to get event tickets.

11. Crowd trying to re-enter the venue (flows inward/outward flows mixed)
    i. Religious leaders taking a route (in wrong directions) in violation of orders in force.
    ii. Unruly and irresponsible crowd behaviour.
    iii. Angry crowd due to delay in the start of the event/late trains
    iv. Last minute change in platform for train arrival/ departure resulting in lots of movements within short time window.
    v. Mad rush to leave school.
    vi. Mad rush to exit/parking space.
    vii. Sudden flow of people in reverse direction.
    viii. Rush during distribution of disaster relief supplies.
    ix. Sudden mass evacuation because of a natural disaster.
    x. Rumours of landslides caused by rains leading to rush down a narrow stairway.

5. Security

1. Under deployment of security personnel to regulate or to control crowd.
2. Lack of adequate scientific planning in making police arrangement to deal with crowd with proper sectoral deployment under an officer with adequate manpower and each sector reporting to the senior police personnel in charge of the police arrangement.
3. Lack of proper wireless deployment with clutter free call arrangement between sector in-charge and officer in-charge of the police arrangement.
4. Inadequate briefing of security personnel on crowd control before deployment.
5. Lack of adequate dress rehearsals before actual deployment.
6. Lack of adequate observation towers with PA system and back up force with proper wireless communication with the tower to

monitor and regulate crowd.

7. Lack of adequate CCTV surveillance of the crowd with PA system to control monitor and guide as and when required.
8. Lack of adequate briefing of the personnel manning the observation towers, CCTV and PA system on dealing with problems in an effective manner as and when they see and observe the crowd.
9. Absence of walkie-talkies for the police on duty.
10. Absence of public announcement systems or effective wireless system with the police.
11. Lack of adequate anti sabotage check of the entire area and sanitizing the same against terrorist, extremist, and separatist attack.
12. Lack of adequate road opening parties to secure the routes of pilgrimage.
13. Lack of adequate door frame metal detectors and frisking of pilgrims entering the pilgrimage area or persons entering the gathering area.
14. Fights within groups of the crowd and with police, other officials etc.
15. Weapon brandished in the crowd.
16. Ineptitude of the police in effectively managing the crowd and enforcing prohibitory orders.
17. Security agency firing/teargas/using force leading to panic and stampede.
18. The crowd forced against sharp metal fencing.

6. Lack of Coordination between Stakeholders

1. Coordination gap between agencies (e.g. Commissioner / Superintendent of Police and District Magistrate; PWD, Fire Service, Forest officials, Revenue officials, medical officers, and shrine management etc.)
2. Poor infrastructure (Plans on paper but no implementation due to lack of funds, resources, or will)
3. Inadequate water, medical assistance, public transport/parking facilities

4. Lack of understanding of the range of duties entrusted.

Communication delays Vacant/late/delayed posting of key personnel, local decision to remove barricades on administrative route to allow a small group of pilgrims.

44.3 Understanding the crowd psychology

The basic element of event/venue planning is to understand the visitors. This, however, is largely determined by the type of event (religious, youth festival, school/university event, cricket/sports event, music concerts, political gathering); season in which it is conducted; and the type and location of the venue (temporal/permanent, open/confined spaces, bus stand, rail/metro station, plain/hilly terrain). Based on this and from prior knowledge and experience, one can and should attempt to determine the type of crowd expected (age, gender, region, locals/visitors, people with special needs etc.) and their estimated numbers. An attempt has to be made, and the intelligence has to be gathered about the motives of various visitors (social, entertainment, political, religious, economic etc.) and unwanted visitors (theft, disruption, terror etc.).

Event/venue managers must identify the various stakeholders and acknowledge their objectives as well. For example, while planning the events, shrine management and security personnel desire high degree of orderliness but local shop owners, priests, and their economic interests cannot be ignored. Certain routes habitually used by locals must be kept in mind. An arrangement has to be made for the media personnel. Community stakeholders (PRIs, CBOs, NGOs, business associations, schools/colleges, and neighbourhood societies/ associations/*mohalla* committees) should be encouraged to take ownership in events.

44.4 Crowd Management Strategies and Arrangement.

The integrated approach for crowd management can be pictorially represented as given in the figure. 1:

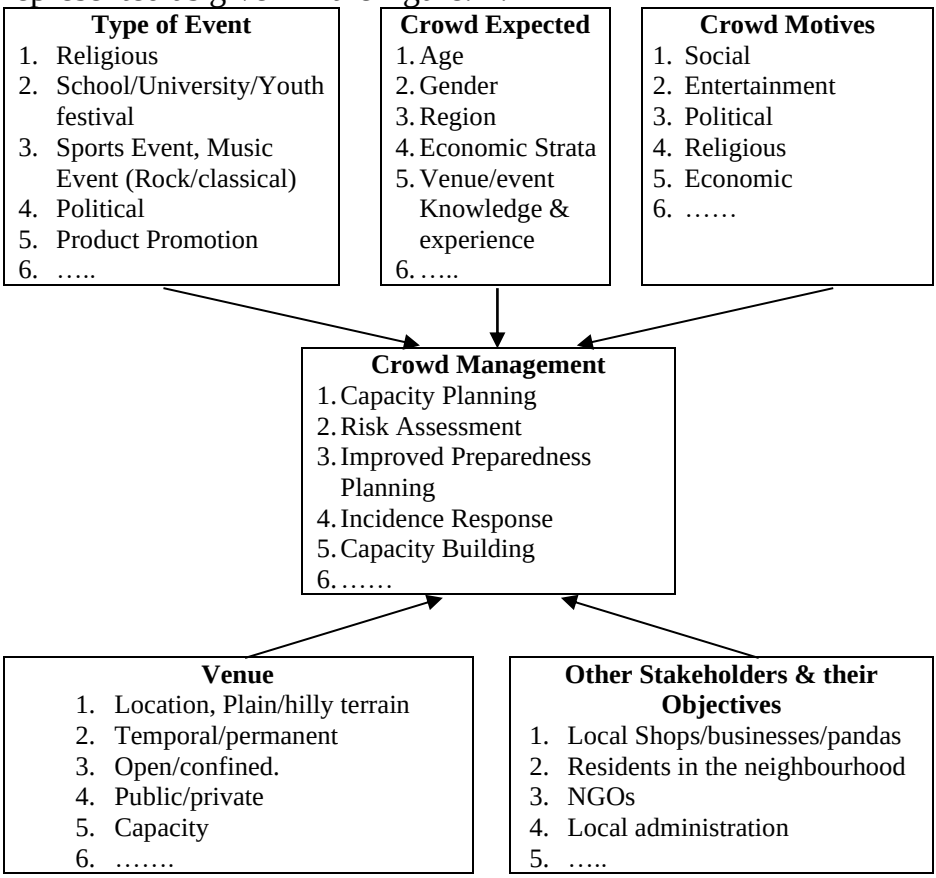


Figure: - 1: An Integrated Approach for the Crowd Management

The various elements of crowd management strategy are:

1. Capacity Planning (long term and short term),
2. Understanding Crowd Behaviour,
3. Crowd Disaster Process
4. Crowd Control
5. Stakeholder approach.

1. Capacity Planning

In India, religious places have high probability of crowd disasters. Obviously, their locations have also played some role in crowd disasters. A large number of religious sites in the country have following characteristics:

1. Located atop hills/mountains with difficult terrain.
2. Mostly narrow, winding uphill pathways along steep hillsides.
3. Access routes encroached by vendors making the access narrower.
4. Lack of adequate flood lighting during night fall.
5. In existence for many centuries.
6. Access routes are prone to landslides and other natural dangers; Chances of accidents are high.

Development of Shrine locality could be difficult in many places, but it is absolutely necessary to develop infrastructure for Crowd Management, as these places are seeing a huge increase in number of visitors. There is a need for **Long Term Perspectives** for infrastructure development which should depend on popularity, periodicity of event, weather, terrain, local population etc. Staging points should be planned for physical or virtual locations through which each visitor must pass. Each staging point should have sufficient facilities for rest, food, water, hygiene. An effective way of counting/monitoring visitors passing through a staging point should be installed to regulate the flow. Plan for physical or virtual locations through which each visitor must pass. An effective way of counting/monitoring visitors passing through a staging point should be installed to regulate the flow. **Multiple routes** should be encouraged (normal, express, emergency) with varying "route gradient". This will also help in the movement of typically vulnerable groups (children, people with special needs etc.)

2. Understanding Crowd Behaviour

Individual behaviour in a crowd is sometimes influenced by the behaviour of others. The individuals within a crowd may act differently than if they were on their own. The unlawful actions of a few people can result in larger numbers following them. Research has shown that understanding crowd behaviour has led to a community-based approach to crowd control instead of force-based control. For example, the excessive wait at places of worship may result in a few devotees climbing up the fences which could lead to a large number following them causing overcrowding in another area. It is therefore essential to identify and separate such miscreants at the earliest. Such miscreants should be immediately quarantined and removed. Action should be taken immediately with tact and firmness, without inviting undue attention from the general public, which may be there if force is used.

Inappropriate or poorly managed control procedures may precipitate crowd incidents rather than preventing them. For example, police reacting to a group of unruly people may chase them in a direction opposite to the incoming crowd, which may create a collision, and hence a disaster. Special attention should also be given to the border of the venue and the floating crowd moving there because the mischief is usually caused at such places.

3. Crowd Disaster Process

The reasons mentioned in the previous section can again be classified into a) Structural Failure, b) Human errors, c) Natural causes. On occasions, these have been caused by a) High attendance Levels, b) as a reaction to Action by Performer, or c) Improper/inadequate arrangements. As a result, there is either panic or excitement in visitor's mind which further leads to evacuation or crowding respectively. When this happens, as

explained by Fruin (1993), the FIST circumstances namely crowd **F**orce, the **I**nformation (false or real) upon which the crowd acts, the physical **S**pace (seating area, chairs, corridors, ramps, doors, lifts etc.) involved, and the **T**ime duration of the incident (rapid ingress/egress) play a very important role resulting in either overcrowding (high crowd density: a large number of people per unit area) or high desired velocity (accelerated movements). On occasions, this has led to deaths because of crushing, suffocation, and trampling. Historically, **compressive asphyxia has been the most common reason for deaths in crowd disasters.** This crowd disaster process adapted from Fruin, 1993; Zhen et al, 2008 is as given below in figure 2.

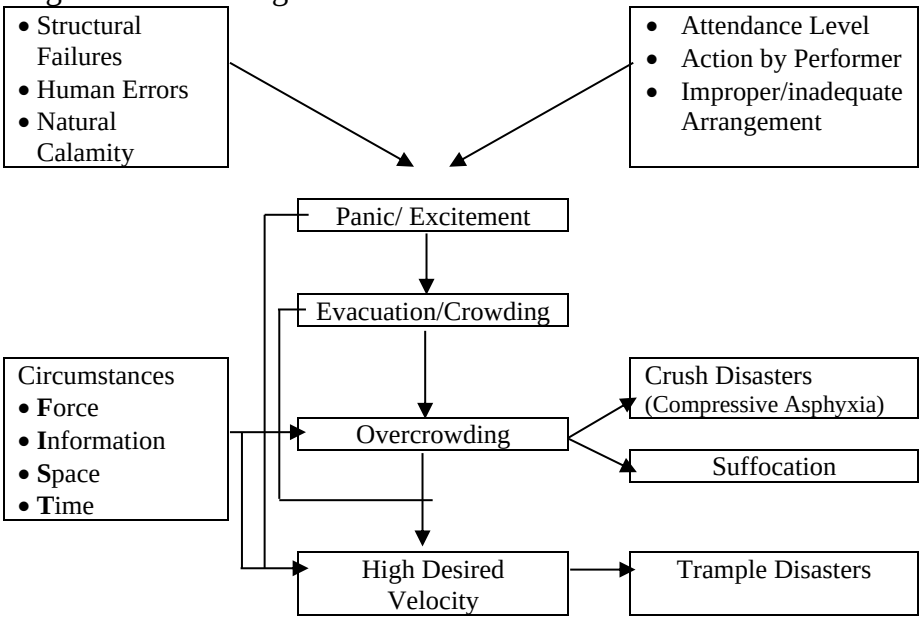


Figure 2: Crowd Disaster Process

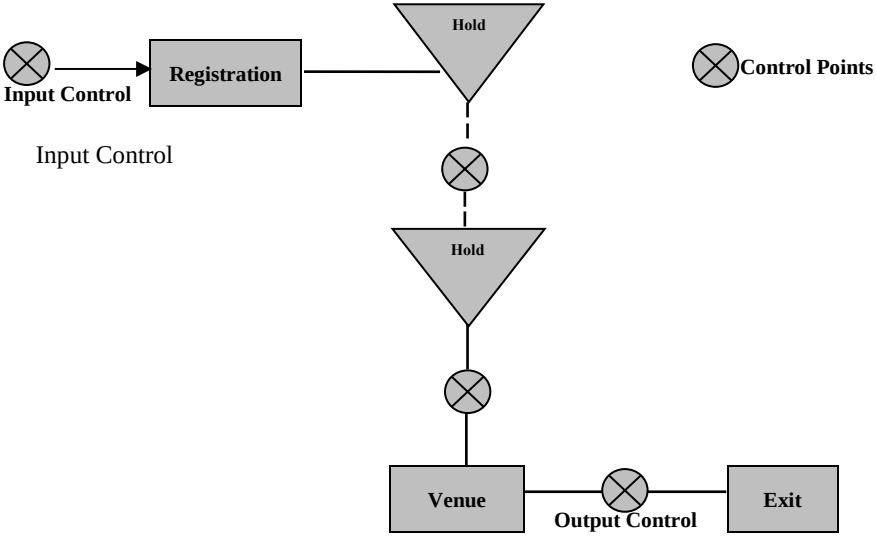
A mere glance through the list of causes of crowd disasters suggests that most of them are man-made, which can be completely prevented with proactive and holistic planning and flawless execution. A thorough assessment of arrangements made at places

of mass gathering against the above list of potential causes should dramatically reduce the chances of a disaster.

Majority of the crowd disasters in India and developing countries have occurred at religious places while stadia, venues of music concerts, night clubs, & shopping malls have been the typical places of disasters in the developed countries. With population explosion and rapid urbanization, Indian cities are likely to be susceptible to crowd disasters at such venues in the days to come.

4. Crowd Control

The guiding principle for crowd control should be managing demand – supply gap through i) Controlling the crowd inflow, ii) Regulating the crowd at the venue, and iii) Controlling the outflow, if needed. The same is represented in the diagram given below:



Hence in order to **Understand the Demand** we need to understand the (i) historical numbers, crowd arrival patterns, growing popularity, type of visitors (ii) to Identify mass arrival time windows creating peaks (season, days of the week, time in the day,

festivals, holidays etc.), (iii) Advance ticket booking/registration (iv) Public transport timetables.

In order to **Understand the Supply,** we need to calculate (i) the capacity at the venue: seating capacity; worships, offerings or prayers possible per hour etc. (ii) Calculate the capacity of holding areas/ queue complex.

At number of places, demand simply outstrips supply, leading to overcrowding. Because of this, there is a need for input control i.e. restricting the number of entries. A mandatory registration process makes this possible. The other possibilities are through influencing arrivals. This can be done through:

1. Informing off-peak times.
2. Have priority queues, visitors with advanced/internet booking, VIP visits during off- peak times.
3. Promote use of a certain mode of transport.
4. Adjusting the event time, keeping in mind regular peak traffic times around the venue.
5. Informing current crowd strength and the expected wait time.

With demand outstripping supply, queues cannot be avoided. At number of places, it is impossible to increase supply capacity because of religious beliefs or the topological reasons. In such cases, since the wait is unavoidable the only possibility is to make it comfortable. The crowd psychology studies (e.g. Chase et. al. 2010) recommend the following softer aspects of managing queues:

1. Do not overlook the effects of perceptions management.
2. Determine the acceptable waiting time for your visitors.
3. Install directions that entertain and physically involve the visitors.
4. Get visitors out of line (e-service etc.)
5. Only make people conscious of time if they grossly

overestimate waiting times
6. Modify visitor arrival behaviour (e.g. inform non-peak hours)
7. Keep resources not serving visitors out of sight.
8. Segment visitors (by personality, age, special needs etc. to provide differentiated attention and/or service)

Hence there is an urgent need to have the following aspects in mind while planning for crowd control.

1. Adopt a long-term perspective.
2. Never underestimate the power of a friendly server (Attempt to) Identify the makeup and motivations of the expected crowd ahead of time to anticipate challenges.
3. Crowd Control Staff should be uniformly dressed (high visibility)
4. Crowd Control Staff Should be in a position to communicate with each other and also to the crowd.
5. Make sure that there are ample entrances and exits (including administrative/ emergency route) at the event, and they remain unobstructed.
6. Monitor Crowd.

5. Stakeholder Approach

Organizers/Temple trusts, Law enforcement agencies must rethink crowd control and encourage community stakeholders (NGOs, Business Associations, Schools/ colleges, Neighbourhood societies/associations/Mohalla committees) to take ownership in events for unity of purpose, faster decisions/response, better coordination etc. a **Unified Control Structure** is recommended.

A Unified Control System brings the agencies with different functional authorities, roles, and responsibilities to work together effectively without affecting individual accountability. Under a Unified Control System, a single, coordinated Incident Action Plan will direct all activities. The control room in charge of the Incident Response System will exercise a single control and all stakeholders

will seek the same purpose in conducting emergency operations.

44.5 Understanding Risk Potential

1. **Risk Analysis and Preparedness**
   It is widely acknowledged that "Prevention is better than cure", and the first aim of any Crowd Management process is to prevent a serious situation from developing. Disasters may often be prevented from happening through careful identification of causes/threats; assessing the risks posed by them.
2. **Identify the threats and causes of development of crowds.**
   Planners can draw upon a wealth of existing information to identify the range of threats/causes of disasters at a given place of mass gathering. First, the planning team members should share their own knowledge of threats the venue and its surrounding community has faced in the past or may face in the future. They should work with the administration or SDMA/DDMA to get information regarding the potential threats/causes in the community that can cause a disaster. This process must include ex- officers/administrators, involved in past events in that area, who can bring a wealth of knowledge about the demography, resources available, limitations, gaps, possible problem areas etc.
3. **Risk Assessment and Planning of crowd.**
   Once the potential threats/causes of disasters are identified, their risk should be assessed. Assessing risk should involve understanding the probability that a specific potential threat/cause will occur; its effects and their severity; the time the visitors need to be warned about the threat; and how long the threat may last. A site assessment may include a review of the site access/exit; structural integrity of buildings; compliance with applicable architectural standards for access and functional needs; emergency vehicle access.
   It is recommended that all event organizers/planners conduct Failure Mode and Effect Analysis (FMEA). This methodology involves rating every possible hazard on the dimensions of a) Severity, b) Frequency of occurrence, and c) Difficulty of detection on a scale of 1-10 to arrive at an overall Risk Priority Number (RPN). The higher the severity, higher the frequency of occurrence, higher the difficulty

of detection, the score assigned would be higher.

The basic premise is that if a disaster can be foreseen, the probably of occurrence is high. For every hazard, actions are then warranted to reduce/remove the risks. See Table below. This exercise should be taken up by every functional department as well.

Table: Sample Emergency Preparedness Assessment Indicators

Category	Indicator
Fire Protection	1. Average Response Time 2. Number of Fire Stations, Distance between them
Emergency Medical Services	1. Average Response Time 2. Number of Medical Personnel 3. Number of first-aid kits available
Other Emergency Functions	1. Established Emergency Operations Centre, Facilities 2. Drills and Exercises
Risk Assessment of Potential Hazard Conditions	**1.** Frequency of Crowd Assembly (Routine, Periodic, One-off) **2.** Risk Priority Number for each of the hazard (failure) mode. **3.** Frequency of Hazard Occurrence, Severity, Difficulty of Detection/Control

Develop Course of Action

A course of action should be prepared by answering the following questions for every threat/cause/gap identified (Source: FEMA 2013)

- What action should be taken for a given cause?
- Who is responsible for the action?
- When does the action take place?
- Where does the action take place?
- How long should the action take and how much time is actually available?
- What has to happen before the action?
- What happens after the action?
- What resources and skills are needed to perform the action?
- How will this action affect specific populations, such as children, the elderly, and individuals with disabilities and others with access and functional needs?

After selecting courses of action, the planning team should identify the resources necessary to accomplish each course of action, and then match them against the available resources. This step helps planners identify resource gaps that need to be bridged.

4. **Information Management and Dissemination**

   The review of past disasters indicates that in the absence of necessary information, people may slow down/panic; change their direction during their movements leading to undesired flows and/or undesirable behaviour. While the absence or poor information management in itself can be a source of crowding, the appropriate information and its dissemination can be a useful weapon in managing crowd. Communicating with visitors and providing them with the correct information is a very critical factor in all situations viz. normal, disaster/emergency, and disaster recovery. Similarly, timely information exchange between various stakeholders viz. event management, government administration, security agencies, NGOs, media, and local population etc. will go a long way in ensuring that crowd gathering events run smoothly and successfully without any untoward incidents.

5. **Information System for Visitors:**

   1. A proper briefing by the organizers, administration and the police making the crowd control arrangement in the local electronic media/press as curtain raiser before the event so that the persons attending the gathering are aware of the arrangements and no way to contact for relief.
   2. Terrain, weather, and climate (a medical fitness certificate may be required at certain places).
   3. An advisory on what is recommended, allowed, and not allowed to be carried along (torch, food, water, medicine, winter clothing etc.).
   4. Maps with places of importance (event venues, hotels, food joints, hospitals police stations etc.).
   5. Event route maps with entry/exit points, locker rooms etc.

6. List of activities at the venue(s), and opening times.
7. Typical peak days/times; expected waiting time.
8. Police, Fire, Ambulance numbers.
9. Registration requirements, virtual queue if any.
10. Transport mode choices to go to/from the venue.

6. During the visit:

1. Dos and don'ts to ensure smooth movement of crowd.
2. Food, Water, toilets, police posts, information points.
3. Routes in and around event venue.
4. Access to first-aid facilities.
5. Suitable entry/exit for emergency situations.
6. Time to join virtual queue and approximate waiting time.

7. Information / Data for Venue/Event Organizers

Venue/Event Organizers and administrators should have the following data/information.

1. Past data on number of arrivals, patterns.
2. Likely arrival times, means of arrival and needs (e.g. Sabarimala Special Trains).

8. Documentation for Process Orientation

1. The venue/event managers may follow the documentation as given below to bring in process orientation to crowd management:
2. Site planning, Master Plan.
3. Contingency Planning Document.
4. Process for identifying hazards.
5. Process for managing hazards.
6. Preparedness assessment check lists for fire/electrical safety for building/structures, queue control and management procedures.
7. Time and motion studies to determine holding capacity.
8. Communication plan (internal/external, before the event/in case of emergency).
9. Capacity building plan, involvement of community,

NGOs, Training Need Assessment.

10. Key contacts.
11. Process for the end of event meeting and documentation. This is very important as these documents will preserve the institutional memory and can act as a knowledge source for the generations to come.

9. Information / Data for Security Personnel

Security Personnel should have the following information with them; carry out through briefing and dry run of the entire department one/two days before the event and also carry out mock drill for disaster management:

1. A detailed map showing entry/exit routes, holding areas, location of emergency services etc.
2. Intelligence on visitors, likely problematic visitors.
3. Timing of peak activities, the routes and venue details.
4. Critical control points.
5. Fire safety drills.
6. Command and control chains.
7. Evacuation and response plans.

10. Information / Data for Local Residents

Local Residents should be provided with the following information.

1. Various events, activities, and their timings.
2. Evacuation and response plans.
3. Channels for information to be passed.
4. Temporary road closures, parking restrictions etc.

11. Information Management

1. If appropriate, delay the sharing of information. For example, if it is preferred that passengers should wait in the large holding areas in the railway station rather than on the crowded, congested platform, the platform number information need not be displayed or announced too much in advance.
2. Train/bus timetables may be displayed at various

locations and in local dailies and not just at railway stations and bus stands. Up-to-date train running status, especially for the trains running late, can be displayed at appropriate locations to avoid crowding at the railway stations.

3. Avoid putting the information source at or close to entry/exit point or other bottlenecks where information seekers are likely to block the movement of the other visitors.

12. Signage

The event organizers have lots of option for information dissemination-

1. Type of sign information (e.g., security, medical, lost and found, promotions).
2. Size and dimension, shape, height, width, depth.
3. Material (e.g., cloth, plastic, flag panels, billboards, streamers, colours, audiovisual).
4. Wording and language specifications; and
5. Location.

13. Information delivery & Choice of Media/Mode

As mentioned earlier the choice depends on type of the event (religious, festival, school/university event, cricket/sports event, music concerts, political gatherings), type of venue (bus stand, railway/metro station, school/college, Open ground/closed hall), type of crowd expected (sex, age, region, regular/occasional visitors, locals/outsiders etc.).

14. Safety and Security Measures

Crush Disasters happen for variety of reasons like

a) The Game/Event starting without crowd control,
b) Overbooking,
c) Mad rush by few in panic/excitement,
d) No assigned seat numbers,
e) Door Buster i.e. heavily discounted retail sales etc.

It is postulated that most of these incidents are avoidable by deploying various safety and security measures.

15. Generic Safety and Security Guidelines

1. Watch towers at all vantage locations with reserve with wireless communication network to assist in case of problem.
2. CCTV monitoring of the entire crowd sector wise at the main control room.
3. Mini UAV for observing the overall crowd in case the crowd spread is too big.
4. Deployment of sector wise proper barricades based on crowd pattern and terrain wise.
5. Have communication channels (PA system etc.) to send a message to the crowd.
6. Monitor crowds for identification of developing hazard points.
7. Deploy snake line approach Ensure that the areas, where barricades like chains are erected, are kept well-lit and visible to visitors during night lest they may trample upon it and if there is heavy rush, that could result in stampede.
8. At a number of religious places of mass gathering located atop hills/mountains, it is frightening for pilgrims to do their religious journey along with the speeding ponies/horses in both directions. Shrine authorities should explore and expedite the possibilities of alternate track for pilgrims on pony/horses. Until this is completed, arrangements should be made to deal with the route cleaning issue and staff associated with it.
9. Discourage general admission.
10. Have alternative routes for releasing excessive crowd pressure.
11. Have plans to take care of VIP visitors. Do not hesitate to refuse entry to VIPs if assessment indicates that it will add to safety concerns.
12. Ask foreigners to register and report regularly.
13. Ensure emergency exits are not barricaded, blocked or otherwise inaccessible.
14. The shops, if possible, have to be confined to one side of the road and there should be a space of 3 or 4 meters in between cohorts of 5-6 shops so that one could escape through such space in the event of unexpected rush.

15. The visitors should be encouraged to throw food waste, plastic bottles etc. in clearly identified garbage bins lined up in large numbers across the roads. This will not only help in creating hygienic conditions but will also avoid panic situations arising out of any dog/monkey/elephant menace.

16. Specific Fire and Electrical, Structural Safety Guidelines

1. Enforce fire safety standards.
2. Ensure that generators, distribution boxes, circuit breakers are in isolated places away from the mischievous crowd elements. There should be adequate fencing and security, if required. The electrical appliances should have protection from the weather too.
3. There should be safe and clearly labelled storage of fuel (e.g. diesel to be used by generators).
4. Attempts should be made to minimize tripping hazards (electrical cables, wires) coming in the way of crowd movements and ensure that these are covered.
5. Ensure that there is sufficient number of fire extinguishers at critical control points and those are of the appropriate type (water/foam/powder) for use.
6. Sufficient number of Fire hydrants and First aid Kits should be available at site.
7. Sufficient number of water tanks should be erected.
8. Only authorized vendors should be involved in cooking and catering. Identity cards may be issued. Random checks should be conducted by police and/or event organizers so as to ensure that only genuine licensees are engaged in sales. NGOs should be encouraged to report the irregularities observed.
9. Establish the load bearing (holding) capacity of the structures. Ensure that the structure is capable of handling the anticipated crowd turnout. Have a factor of safety.
10. Ensure that lifts stairways are well-lit, are in working condition and have unblocked access.
11. Ensure that all the structures and electrical wiring/appliances are certified for safety by technically qualified personnel as

designated by the government or as specified in the orders as to who should certify.

17. Cautious Use of Ropeways, Helicopter services

At a number of places of mass gatherings, venue managers have (or have proposed) alternate routes for visitors in the form of ropeways and helicopter services. While these will definitely help in emergency situations, and normally reduce a) the congestion on the regular routes, b) journey time, a mad rush for these services is observed. There should be, in general, stricter security norms for these. These services should be reasonably priced, else there will merely be a shift in crowding from the regular routes to ropeways and helicopter services.

44.6 Deployment of Barriers

Barricades, roadblocks, and fencing may be deployed in target areas as deemed fit. These can be deployed to control the flow of pedestrians, hostile groups, and vehicles. The type and material of the barriers (refer to the table below) should be in line with the intended purpose, crowd density and force expected. For example, roadblocks for vehicular movements should be made up of large, heavy objects and should cover the complete width of road including footpath, if any. Care should be taken that the barriers should be strong and safe as people, at time, may lean against them. The flexible barrier design should be preferred at the exits. All the barriers should be visible, and the area lit up properly in case the gathering is for the night.

Type of Barrier	Material	Purpose
1. Barrier/fencing 2. Portable (temporary)/permanent 3. interlocking/standalone	1. Wire mesh 2. Steel 3. Plastic 4. Concrete bollards 5. Wood 6. Bamboo 7. Sandbags etc.	1. Controlling flow of pedestrians/vehicles 2. Directing the flow 3. Blocking the movement 4. Area delineation: Separating the groups, marking the boundaries. 5. Safety and Security etc.

44.7 Facilities and Emergency Medical Services

Although it is commonly known that immediate medical attention after a fatal incident can save lives; presently, probably, there is no official requirement or standard for first aid rooms and on-duty medical personnel at places of mass gatherings. No wonder that some of the event/venue managers avoid/postpone investments in medical services/staffing infrastructure to save their funds. The shortage of medical, paramedical, public health professionals adds to the woes of others. The implications are loud and clear: Medical Preparedness is one of the weakest links in crowd disaster management.

The need is to develop mechanism for awareness creation, ensure availability of trained first-aid staff, kits, adequate stretches, emergency lifesaving medicines and devices, ambulances, mobile hospitals/teams, hospital disaster management plans, and addressing concerns in public health. The state/district administration should accordingly equip, train, and prepare the doctors and the other staff of the medical department.

Similarly, there are no standards on requirements of food, drinking water, and sanitation facilities. Improvements on these fronts too can go a long way in managing visitors' experience and perception.

Emergency Medical Services

It is recommended that all the venue/event managers should document their current Facilities and Emergency Medical Plans for disaster management and prepare a Roadmap for improvement in Facilities and Emergency Medical services in the next 5 years. For an elaborate discussion on hospital emergency medical planning, please refer to GOI-UNDP (2008).

44.8 Transportation and Traffic Management

Consideration of available transport facilities, parking and traffic flow is very important in event site selection, crowd control, and also in emergency evacuation. The guiding principles in

transportation and traffic management should be to use public transport as much as possible and minimize the impact of undesirable crowds and traffic.

The following section provides generic traffic management guidelines for police/traffic control staff, visitors, and local residents/NGOs.

Inform the traffic control staff about the event requirements, expected turnout, key event location and timings. Assess the impact of location, events close to the main venue, construction work (if any) on traffic.

1. Assess the parking space required.
2. Erect observation towers with PA system, wireless communication with the traffic police controlling the movement of vehicles in the parking space and binoculars for identifying vehicle numbers, for observing and regulating the traffic in the parking area.
3. Clearly identify parking spaces for 2/3 wheelers, cars, and buses. The public transport system needs to be terminated a reasonable distance away from the venue of interest. This will help in avoiding a direct rush into the venue.
4. The above principle applies for private vehicle operators and private vehicles also. This termination of vehicular movement must be supported by other means of transport (for the elderly/handicapped as per needs) towards the venue or by walking. The idea is to ensure gradual entry into the queuing system rather than a surge.
5. Restrict entry of vehicles (and type) beyond parking lot.
6. Regulate and arrange parking of vehicles. Maintain orderliness.
7. The venue of termination of public/private transport system must be large and must have clearly marked ingress and egress route.
8. Visit/check parking spaces regularly before the event.
9. Are visitors aware of the nearest railway station and bus stand and existing timetables? Are there any special buses/ trains arriving/ departing? Ensure that the visitors are aware of the peak times.

10. Coordinate with railways and bus operators well in advance so that they don't announce too many special trains/buses unilaterally.
11. Calculate the staffing requirements at parking spaces, railway stations, bus stands, road intersections and pedestrian crossings.
12. Prohibiting vehicular traffic on certain roads around the event is, generally, helpful in avoiding uncontrollable rush of people.
13. If roads leading to/from venue are narrow and sans divider, consider one-way movements only. Avoid inbound/outbound crossings.
14. Introduce shuttle bus services between key locations.
15. Clearly identify and label administrative/emergency routes which would be closed for vehicular and pedestrian movements. Pick appropriate fencing on these routes to prevent possible blocking by unauthorized movements.
16. Ensure that the emergency routes are weatherproof.
17. Consider charging high parking fees for private vehicles to discourage them from using those.
18. Consider charging a high halting fee to discourage overstay.
19. Provide shelters on the routes/ bus stop.
20. Ban unnecessary shops; remove illegal structures on the roads.
21. Movement of VIPs, foreign dignitaries, and diplomats should be on a separate route, if available. Consider using administrative/emergency route, otherwise.
22. Ensure that the routes are well lit.
23. Construct barricades to streamline flows or block movements at appropriate places as deemed fit.
24. Consider constructing temporary waiting halls enroute the venue. Ticketing, numbering, and registration systems can be put up at these gateways to limit the number of visitors or regulate their movements.
25. Inform the local residents/NGOs about the timing of the events and key locations and possible congestion areas.
26. Inform them about route planning around the event dates. Clearly mention the no entry zones, one-way etc. Distribute route maps in

the form of pamphlets, publish in local dailies, TV channels and put the same on hoardings at key locations.

27. Consider introducing free/subsidized shuttle services for locals a few days before the event so that they won't get any entry/one-way surprises which they may while using their own vehicles.
28. Introduce a traffic control plan a few days before the event so that the locals can get used to it.

44.9 Emergency Transportation Plan

1. Create a contingency/emergency plan to allow quick deployment of buses, ambulances, vans etc.
2. Calculate the inventory required of such vehicles, drivers required and clearly establish instructions for their use.
3. Identify the appropriate locations for standby ambulances.
4. Clearly define emergency routes from the venue to the hospitals nearby.
5. Involve locals, NGOs, CBOs, PRIs, Ward members etc. to use their local knowledge.
6. Clearly lay down the procedures for removal of barricades: under what circumstances, who decides that etc.

44.10 Railway Board Guidelines about Crowd Management

The Railway Board has issued guidelines vide RSMS message No. 2017/ SEC(INT.) / 51/ 3/4-442 dated 08.1/2018 and letter No. 2018/ SEC (INT.) / 51/ 3/ 4-442 dated 15.10.2018 for proper crowd control at the railway stations in view of the upcoming festive season. Necessary security arrangements must be in place at all important stations by now.

Refer to the incident of stampede at FOB of Santragachi Railway station /SER on 23.10.2018 resulting into death of 2 passengers and injury to about 12 passengers. There may be several reasons for this stampede for which an Enquiry Committee has been set up. Such incidents have occurred in the past also: Structural, procedural, and operational shortcomings often lead to stampedes. The Solution lies in comprehensive planning and collective work of different branches. There is an immediate need to have a security protocol which addresses the issues of over-crowding at FOB, platforms and last-minute change of platforms which generally result in such stampedes.

The following advisory is being issued for strict compliance to all concerned: -

1. FOBs need to be kept clear of any obstruction. No one should be allowed to squat / sit on the FOB and the stairs leading to it. There should be continuous movement of passengers on the FOBs. Action should be taken to ensure that there are enough CCTV cameras fixed at proper angles to watch the movement of passengers on FOBs, stations, platforms, entry/ exit points and circulating area. The CCTV control room staff should, round the clock, watch the movements of passengers and whenever there is a crowd on FOB or at the platforms, it should be regulated by deploying enough security staff.
2. In case of rush at the FOBs, security staff should use ropes to ensure one way movement of passengers. Passenger crowd should be controlled at the entry points of the stations, so that platforms and FOBs are not dangerously crowded. For this purpose, holding areas should be identified outside the stations. Proper shades with seating arrangements should be provided in these holding areas.
3. It should be ensured that wherever elevators are fixed, it does not reduce the capacity of FOB. Efforts should be made to have separate FOB with elevator. FOBs of inadequate size should be identified and brought to the notice of the concerned officers for increasing their size or numbers. FOBs are to be treated as Safety items with no restriction of budget instead of passenger amenity as per instructions of Hon'ble MR communicated vide Railway Boards letter no. 2017/E86R/8(1)/4 dated 4.10.2017.
4. Ensuring announcement / display about arrival and platform position of trains well in advance to reach the passengers at platform instead of waiting on the FOBs to know the platform number.
5. Most of the old FOBs are very narrow in space. Bidirectional movement in such narrow FOBs is one among the major reasons for stampede. New FOBs with adequate width are to be constructed to cater the volume and it should have physical partition to have bidirectional movement.
6. If the position of old FOB is strategically located in a place where it is more convenient for passenger movement, an additional FOB

along its side must be constructed so that both FOBs can be used for passenger movement in different directions.

7. During festive occasions and mela times when there is an unusual hike in the volume of passengers, it is advisable to extensively use the pathways at the end of PFs in both UP and Down directions with rope partition. It will very much ease the utility and load on FOBs. These pathways should be the emergency exit routes in security plan during unusual situations and not the FOBs.
8. Co-ordination should be maintained with Operating Control room and senior operating officers for ensuring advance information to RPF / GRP in case of last-minute changes in the train platforms. Railway Board has already written to all General Managers vide Fax / COIS MAIL No. 2014/Chg./24/2 dated 4.5.2018 that nominated platform berthing for passing through trains should not be changed at short notice except in case of extreme emergency with the approval of competent authority. It should be ensured that in rare cases of such a change, the passengers are immediately informed by announcements on the Public Address System. The passengers must be allowed adequate time to reach their trains / platforms. It should be ensured that the Public Address System is working properly, and announcements are audible to the targeted passengers.
9. It should be ensured that originating trains are stationed at railway platforms at least 30 minutes before their scheduled departure. During rush days or whenever there is any festival, adequate arrangements should be made to guide the passengers about their trains and platforms at the entry point of the station itself. It would be better if commuter trains and Mail/Express trains were nominated permanently to the separate platforms, as it would help in segregating the Mail/Express train passengers from local passengers.
10. Some terminating trains are known for carrying and discharging large crowds in major stations. Receiving those trains in end platforms (either first or last which are attached to stations exits) will help the huge volume of passengers to exit the station immediately without using any FOB.
11. Booking halls at all important stations should have display boards of

adequate size indicating the trains, their departure time, and platforms. It will avoid unnecessary cross movement of passengers going to enquiry windows.

12. Digital electronic screening of trains and PFs to be exhibited at important stations and should remain 24 hrs operational.
13. Unauthorized entry inside the railway stations should be strictly restricted. The concerned Commercial Officers may be requested to regulate the number of platform tickets for each passenger. Proper arrangements, in co-ordination with concerned officers, be made for coolies, porters, handcarts, wheelchairs etc., so that passengers don't feel necessity of taking many attendants with them and thereby crowding the platforms.
14. In a bid to cope with the festival rush at major stations the Commercial Department may be advised to restrict the sale of platform tickets during the specific period.
15. Action should be immediately taken to identify sensitive railway stations with reference to their traffic density and festive season requirements. RPF/GRP should regularly hold a drill at these stations for co-ordinated action in case of overcrowding and announcements for change of platforms. These drills should be supervised by concerned Sr. DSC, at least once a month, at all important stations. Feedback reports for appropriate action be submitted to higher authorities after every such drill.
16. Jurisdictional post in-charges should be aware of any crowd gathering in their jurisdiction during mela, immersion of idols and other rush etc. So necessary security arrangements can be made in advance.
17. SIB staff must give feedback about the crowd / devotees gathering well in advance to the division and post.
18. Assessment of physical barriers / obstructions which may lead to chaos/ stampede should be identified and be removed immediately.
19. Study of crowd pattern, their movement and behaviou0r should be briefed to all staff deployed for crowd management duty.
20. Disaster Management Team/ quick reaction team at stations, where foot falls are more than one lakh per day have to be kept ready at

important railway stations to meet any eventuality.

21. Necessary infrastructural changes, modification and upgradation may be surveyed and be taken up by responsible authorities.
22. Divisional In-charges shall be instructed to take appropriate steps according to the situation apart from the above measures in order to tackle the situation.

    The above instructions are not exhaustive and may require additions / modifications to suit local conditions. Necessary coordination should be maintained at all times with concerned railway authorities, civil police, GRP & state administration for effective implementation of the security protocol.

Reference: Letter no. 2018/Sec (Cr.)/45/50/Festival dated 02.11.2018 is issued and signed by Arun Kumar, Director General, RPF, Railway Board for The General Managers and all Zonal Railways and CMD/KRCL.



Kacheguda Railway Station

COMMERCIAL INSPECTION

45

There are many ways of doing a job. But there is only one way of doing it in a precise and correct manner. Station Masters and Superintendents, as also Inspectors and Officers of the Commercial Department, have to ensure that all the jobs at all the stations within their jurisdiction are done in that correct and precise way. For this, it is essential that the Commercial Officers and Inspectors as also the Station Masters should have an effective control over the working of the stations within their area of control. They must know how well their subordinates are functioning; whether the staff have done as they have been directed, whether they are putting out work of a satisfactory quality and in a satisfactory quantity. Such a check-up is possible through inspections.

The utility of inspections lies not only in the detection of faults. lapses and irregularities already committed but, in the steps, taken for avoiding their recurrence. One of the ways to achieve this is that the inspecting officials give proper directions to the staff regarding the correct and concise way of doing a particular job during the course of the inspection itself.

45.1 Objective for Commercial Inspections

A Commercial Inspection has a multipronged objective, and its scope is wide. The principal objective of an inspection by the commercial officials, however, would include the following: —

(i) To check up whether a high standard of cleanliness and orderliness is being maintained at the station platforms, in retiring rooms and waiting rooms including waiting halls, in catering establishments, such as, restaurants and refreshment rooms and in various booking and delivery offices, go-downs, etc., as also in the bathrooms and lavatories.

(ii) To observe whether the commercial staff are prompt, alert, civil and obliging, and that they pay adequate attention to the comforts and conveniences of the railway's users.

(iii) To check up whether the commercial staff are fully conversant with the rules and regulations laid down for the performance of their respective duties.

(iv) To see whether the rules laid down for the booking, handling, despatch, storage, and delivery of various items of traffic, including explosives and other dangerous goods, are being carefully observed.

(v) To see whether the rules and instructions prescribed for prevention of loss of or damage to consignments are properly observed.

(vi) To check up if adequate steps are taken for connecting the unconnected packages.

(vii) To see whether adequate arrangements exist for prevention of leakage of railway revenue through ticketless travel, misdeclaration, under-weighment or any other cause.

(viii) To see whether proper attention is being paid to the clearance of station outstanding.

(ix) To see that initial records and documents at stations are maintained properly and in accordance with the extent rules and orders, and that the various returns are being submitted to the traffic accounts office on due dates.

(x) To see whether the procedure prescribed for handling and taking

and making over of cash at the stations is being rigidly followed by the staff concerned under security arrangements appropriate for handling the cash and travelling cash safes at all stations:

(xi) To examine if any loss or leakage of railway revenues is taking place through evasion, misapprehension or abuse of rules:

(xii) To examine and analyse the causes of diversion of traffic, if any, to other means of transport; and

(xiii) To see if any improvements in the methods of working at the station are necessary to achieve efficiency and economy or to retrieve the traffic, if any. diverted to other means of transport.

45.2 Frequency of inspections

Every station, including an out-agency, a city booking office and a tourist agency should be inspected by a Commercial Officer and/or a Commercial Traffic Inspector at specified intervals as notified by the Principal Chief Commercial Manager, who will also decide as to which stations are to be inspected by each Divisional Assistant Commercial Manager. Even where the Principal Chief Commercial Manager has allotted the inspection of a particular station to a Divisional Assistant Commercial Manager, such a station must also be inspected regularly by the Commercial Inspector: in other words, the inspection of such stations by the Officers will be in addition to, and not in substitution of, the inspection by the Commercial Inspectors.

45.3 Inspection by Station Masters

As stated in para 2904, the inspections by Inspectors & Officers have to be periodic and at certain specified intervals of time. As against these, Station Master's inspection should be a continuing process. His inspection should be so phased as to cover all aspects of working over a period of the month. His inspections, therefore, will be month-wise rather than monthly. The Station Masters, therefore, should work out a roster of inspection for himself from day-to-day, fixing as to how he will distribute the various items to be inspected during the course of a month. This, however, will be

in addition of the details of work that should receive his attention every day.

45.4 Inspection by Commercial Officers and Inspectors. —

The general procedure to be observed by a Commercial Inspector during the course of his inspection has been dealt with in this Chapter. Besides, in certain cases the checks to be exercised by the Commercial Inspectors have also been dealt with at appropriate places in Chapters of this Manual. Although care has been taken to include all items requiring attention of the Commercial Inspectors, it may be appreciated that any set of rules, however, elaborately detailed, cannot meet every contingency. Much, therefore, depends upon the personal interest, intelligence, and initiative of the officials in their conducting a station inspection.

Unless otherwise notified by the railway administration, the procedure for inspections by Commercial Officers should be on the same lines as indicated in this Manual for Commercial Inspectors.

45.5 Check of books and documents. —

(a) In examining the various books and documents required to be maintained at the station, the Commercial Inspector should pay personal attention to the way in which these have been maintained. He should specially scrutinize cases of erasures, disfiguring, overwriting and corrections in all the books and other documents so as to ascertain whether these are merely the result of careless or indifferent working or a deliberate attempt to falsify or confuse the records with a mollified intention.

(b) All books and documents examined by the Commercial Inspector must be initialled and dated by him in ink, indicating the designation under his initials. All items checked should be ticked off in ink, the ticks being neat and tiny. Whenever two corresponding entries of different books |documents are checked, both the entries should be ticked off and not merely one. It is important that evidence should be on record of all checks exercised by the Inspector, as in the absence of such evidence, the normal

assumption would be that these items had not been checked or inspected.

45.6 Cleanliness and orderliness. —

The general appearance of the station as a whole should receive special attention of the inspecting officials. It should be seen that the station premises are kept clean and well-lit. The arrangements for eradicating the nuisance of beggars and stray cattle within the station premises should also be checked to ensure that these are adequate.

45.7 Duty lists

It should be seen by the Commercial Inspector that the duty lists of all the staff approved by the competent authority are properly displayed at appropriate places and that the staff are attending to their duties in time and are in uniform with proper badges and insignia, where provided. Any cases of incivility and indiscipline on the part of the staff, whether within or outside their duty hours, coming to the notice of the Commercial Inspector, should be taken up.

45.8 Public complaints

(a) In regard to the public complaints and suggestions, it should be seen that—

(i) 'Complaint and suggestion books' supplied by the Divisional Office are kept on the racks provided for this purpose at various places including refreshment rooms and other catering and vending installations.

(ii) Station Master has examined and initialled the 'complaint and suggestion book' every day and that appropriate action has been taken on the complaints and suggestions recorded therein.

(iii) reference to letter from the competent authority advising the final disposal of the complaint suggestion has been recorded against each item in the complaint and suggestion book; and notice indicating that the 'complaint and suggestion book is available with.....' has been conspicuously displayed at

appropriate places.

(b) The date of the oldest complaint/suggestion, which has not been finally disposed of under orders of the competent authority, should be indicated in the Inspection Report and cases of inordinate delay in the disposal of the complaints should be brought to the personal notice of the Sr. Divisional Commercial Manager.

The general nature of complaints and suggestions should be examined and remedial measures for removing the difficulties experienced by the public should be suggested to the Station Master through the Inspection Book. Repeated complaints of uniform nature or against a particular member of the staff should be specially reported to the Sr. Divisional Commercial Manager for necessary action.

45.9 Tariffs, manuals, and circulars

(a) All the tariffs, manuals, and other books of reference at the station should be examined to ensure that they are kept up to date, with all correction slips duly posted, and that the instructions notified from time to time are understood and correctly carried out by the staff (see para 117) also. For this purpose, the inspecting officials should keep a list of file latest correction slips issued to various tariffs, manuals, etc., readily available with them for comparison with the register of correction slips appended to the respective tariffs, manuals, etc. The inspecting officials themselves should have knowledge of the instructions conveyed under these correction slips to satisfy themselves on their application by staff.

(b) Similarly, the files of rate advice, rate circulars, gazettes, etc., should be scrutinized to see that these are properly maintained and that their contents have been noted by staff and are understood and followed by them.

45.10 Money value books

At least ten series of the money value books should be checked with the relevant stock book to see that the balance on hand is correct. The series of money value books checked should be indicated in the Inspection Report. It should also be seen that the stock on hand is

adequate to meet with the day-to-day requirements at the station, that the instructions regarding the indent, receipt, examination, custody and issue of money value books are being correctly followed by the stall and that the stock book is properly maintained.

45.11 Other books, forms, and stationer

In respect of other books and forms and items of stationery, it should be seen that the indents are placed on due dates according to requirements and that the stock on hand is neither insufficient nor excessive in comparison with the requirements of the station. In case the stock of books and forms is in excess of the normal requirement of the station, arrangements may be made for transferring the same to other stations on the Division where these could be utilized advantageously. It will be expedient for the Commercial Inspectors to keep a note of the stations where the stock of books and forms is either too low or very high so that transfer of the excess stock could be arranged without any difficulty. In case where the stock of books forms cannot be utilized by inter-station transfers, the same should be returned to Stores Department.

45.12 Attention to correspondence. —

(a) In respect prompt attention to correspondence, it should be seen that the relevant registers are correctly maintained of prompt attention to correspondence, it should be seen that the relevant registers are correctly maintained and that there is no delay in disposing of the letters received at the station.

(b) In the case of letters received from distinguished or important persons including Members of Parliament and State Legislatures and various Consultative Committees, it should specially be seen that these receive Station Master's immediate and prompt attention. It should further be ensured that whenever a letter received at the station cannot be finally disposed of immediately, an interim reply acknowledging the receipt of the letter is sent whenever circumstances would appear to call for such a reply.

45.13 Fluctuation in earnings

(a) The earnings under various heads of accounts at the station should be reviewed for the last three years and the causes for abnormal fluctuations analysed. In case the earnings have been dwindling, this fact together with the reasons therefore and the remedial measures which could augment the railway revenues, should be specially indicated in the Inspection Report. It would be available to send a report personally to the Divisional | Assistant Commercial Manager.

(b) If the fall in the earnings is attributed to competition from other means of transport, such as road or river, it should be critically examined if this is the result of change in the policy of issue of licences or permits for the operation of such other means of transport. The result of this examination indicating the fall in the earnings should be reported to the Sr. Divisional Commercial Manager for necessary action. Any other suggestions for increasing the railway revenues, which the Inspector may feel necessary to make as a result of his experience of the local conditions obtaining in the area, should be specially brought out in the Inspection Report.

45.14 Custody and handling of cash and travelling cash safes

(a) The arrangements for making and taking over of cash between the various members of the staff should be checked up to see that there is no lacuna in the procedure and that in case of deficiency or loss of cash, responsibility could be properly fixed. It should be seen if the security arrangements existing for handling the cash at various stages including the handling of travelling cash safes at the station, are adequate.

(b) the cash remittance notes for at least one calendar month should be examined to see that, these had been correctly filled in and that the cash receipts had been correctly pasted with the block foils of the relevant cash remittance notes. The calendar month selected for this check should be indicated In the Inspection Report.

While travelling by the train carrying traveling cash safes, the Commercial Inspector should make it a point to keep a watch over

the depositing of cash bags in the travelling cash safe and see that instructions issued on this subject are being correctly followed by the Station Master Assistant Station Master and the Guard. Any disregard of rules noticed in such checks should be specially reported to the Divisional Railway Manager for taking up suitably with the staff at fault. The staff should also be suitably activated to follow the correct procedure.

45.15 Submission of returns. —

(a) Transmit mean for various returns should be examined for at least three calendar months to see that all the returns were correctly submitted to the Traffic Accounts Office on due dates and that the acknowledgements received therefore have correctly been pasted with the recode foils of the relevant transmit memo.

(b) The actual dates of submission of various returns as per transmit memo should be compared with the entries in the 'calendar of returns' for at hast one calendar month to see that the latter is correctly posted. The 'calendar of returns' should be examined to see that it had been posted up-to-date and that all the returns due till the date of inspection had been submitted correctly. If the submission of any returns is in arrears effective steps should be taken for their submission to the Traffic Accounts Office without further delay.

(c) The period for which the checks prescribed in (a) and (b) above have been exercised should, be indicated in the Inspection Report.

45.16 Preservation of records

It should be seen that various items of initial records and registers prescribed under the rules are being preserved neatly and methodically so that there is no delay in producing the same wherever required. If any lapses art noticed specific instructions should be given to the Station Master through the Inspection Book for improving the preservation of such records.

45.17 Recovery of rent, licence fee, etc.

The registers of recoveries from vendors, stall-keepers, plot-

holders, licensed Porters, etc., should be examined to see that these are properly maintained and that no amount fallen due has remained unrealized. The non-collection or late recovery of rent or licence fees, etc., should be taken up with the staff at fault and arrangements made for the recovery of the arrears, if any, without further delay.

45.18 Supply of drinking water

The adequacy of the number of watermen and the arrangements for storage and supply of clean drinking water to passengers should be reviewed and shortcomings, if any, reported through the Inspection Report. During the summer season, it should also be seen that proper arrangements exist for supply of cool drinking water to the passengers.

45.19 Licensed Porters

It should be seen that the number of licensed Porters engaged at the station are adequate to meet with the requirement of the travelling public and that the licensed Porters, attend to all trains in proper uniform and with metal badges provided for the purpose.

45.20 Public announcement system

The public announcement system, if provided at the station, should be watched to see that it serves the purpose for which it is introduced. The Commercial Inspector should satisfy himself that the equipment is in perfect working order and that the voice is clear and not jarring to the ear. Regular announcement regarding late running of trains, if any, in the prescribed languages by rotation, should be specially watched.

45.21 Catering and vending services

In the restaurants, refreshment rooms and other catering and vending services, whether run departmentally or through contractors, it should be seen that—

(i) proper lighting and ventilation have been provided.

(ii) arrangements for sanitation and protection from flies arc satisfactory.

(iii) wire mesh is used for protection of foodstuffs.
(iv) the vendors bearers wear clean and tidy uniforms and badges.
(v) medical and character certificates as required are available at the station for the persons engaged.
(vi) water is stored properly and is used after boiling and cooling, and that ladles are used for recovering water from the storage post.
(vii) utensils and crockery are clean, and art sterilized as per extant orders.
(viii) table clothes and other linen are washed and cleaned properly.
(ix) provisions and other stores are neatly arranged in the storerooms and protected from in section etc.
(x) quality and quantity of eatables served are in accordance with the minimum standards prescribed by the administration.
(xi) articles on sale are in accordance with the list approved by the competent authority and that rate lists have been properly exhibited as per extant orders.
(xii) actual number of salesmen vendors, trays trolleys, etc., does not exceed or fall short of the sanctioned number.
(xiii) notice regarding the cooking media is properly exhibited:
(xiv) hawking during night hours is done in a subdued voice so as to avoid disturbance to sleeping passengers.
(xv) vendors do not pester the passengers in any way for selling their goods or otherwise; and
(xvi) catering service is otherwise being run satisfactorily and that all rules and instructions issued by the administration from time to time are being correctly followed.

45.22 Bookstalls

In the bookstalls, it should be seen that—

(i) adequate number of books and newspapers, both in English. Hindi and regional language are available for sale at all times.
(ii) no obscene or prescribed picture or literature, is put up for sale or otherwise exhibited.
(iii) second-hand books or other literature is not put up for sale.
(iv) selling price has been indicated on each book and that it is

reasonable; and

(v) other instructions issued by the administration from time to time are being correctly followed by the bookstall-keeper.

45.23 Stock of tickets in tubes and store

The inspecting official must check and count the tickets in tubes and stock for at least ten series which should be selected at random and not in any particular order from the local and through printed card and season tickets. This check should be exercised as early as possible after arrival at the station. The series checked, together with the result of check, should be indicated in the Inspection Report. Any serious irregularities noticed in this regard should be investigated on the spot and a detailed report submitted.

In UTS and PRS officers sufficient ticket roles and other stationary items should be available.

45.24 Booking Office

In the inspection of a booking office, the following points should merit special attention: —

(i) Whether the number of booking windows provided is adequate and whether separate booking windows for ladies and upper-class passengers have been provided wherever the traffic offering would warrant this.

(ii) Whether the booking windows are opened in time and whether there is any necessity for altering the time for opening the booking windows to cater to the needs of the traffic offering.

(iii) Whether the passengers queue up before the booking windows at the time of purchasing the tickets and wherever necessary, staff educate the travelling public in this regard.

(iv) Whether the booking windows are properly lit up at night to enable the passenger to check: their tickets and change before leaving the booking window.

(v) Whether sheet timetables and fare lists (see para 113) have been conspicuously exhibited neat the booking windows or at other places within the station buildings to which the passengers have easy access before taking their tickets.

(vi) Whether the notices regarding the hours of business and examination on change and tickets before leaving the booking window are properly exhibited.

(vii) Whether the estimate of tickets (see para 219) has been correctly prepared and whether any revision is necessary due to abnormal fluctuation of traffic.

(viii) Whether the indents are submitted properly on due dates, in accordance with the estimate of tickets and whether the stock o: tickets on hand is adequate.

(ix) Whether the ticket cases, tubes and almirahs are properly cleaned and are free from dust and insects.

(x) Whether random check of tickets in tubes supplied to the station is adequate and whether they are in perfect working order.

(xi) Whether random check of tickets in tubes and stock is correctly exercised by the station master and the result recorded in the daily trains cash book-cum-summary.

(xii) Whether he fares on tickets have been corrected, wherever necessary, before replenishing tie tubes.

(xiii) Whether excess fare tickets, blank paper tickets, etc, are legibly and correctly prepared.

(xiv) Whether the imprest cash at the station is adequate to meet with the demand of passengers in respect of small change.

(xv) Whether the passenger fare notebooks for through traffic (see para 261) are correctly maintained.

(xvi) Whether he train-wise shift-wise cash is collected from the booking clerks by the station master, or any other staff authorized in this behalf.

(xvii) Whether the notice regarding 'availability of platform tickets', when stocked at the station has beer correctly exhibited.

(xviii) Whether the daily trains cash book-cum-summary is posted up-to-date and signed by the staff concerned,

(xix) Whether the station master or any other authorized staff has signed the certificate in the daily trails cash book-cum-summary (see para 714).

(xx) Whether there are repeated deficiencies in cash by a particular

booking clerk and whether this is due to intentional falsification of accounts, with a mala fide intention.

(xxi) Whether the deficiencies in cash are made good by the staff immediately as per extant orders.

45.25 Reservation Office

(a) In the reservation office, it should be seen that the reservation registers are properly maintained and that regret slips are issued when accommodation is not available. A few entries in the reservation charts should be checked with the reservation register to ensure that the berths seats are allotted in accordance with the rules laid down by the railway administration.

(b) Where a booking and reservation office has been work-studied and consequent recommendations like the introduction of Kardex Book Units and combining the booking and reservation functions at the same counter have been introduced, it should be seen that the working of the reservation office is carried on according to the revised procedure since introduced, and that there is no slipping back to erstwhile methods of working on any detail.

(c) Tatkal timing should be followed without fail. Precaution should be taken to avoid touts' activities. Rotation of the staff should be ensured.

(d) Reservation requisition slips should be filled properly by passengers. These slips should be preserved for the specified period.

(e) Special monitoring on non-issued and special cancelled tickets to be ensured.

45.26 Collection of tickets and Ticket Collectors Report

(a) While at the station, the Commercial Inspector should watch collection of tickets preferably by the train by which he has arrived to see if the tickets of the incoming passengers are being correctly checked and collected wherever necessary. The percentage of tickets missing in such a collection should be compared with the corresponding figures of the previous days and causes of abnormal fluctuation, if any, should be investigated. If any deficiency exists in the existing arrangements, the same should be removed and

concerned staff imparted suitable advice in the matter.

(b) It should also be seen those arrangements for the check and collection of tickets, including luggage tickets, are adequate and that the collected tickets are properly cancelled and kept under lock and key till they are submitted to the Traffic Accounts Office along with the relevant Ticket Collectors' Report.

(c) The statement of missing tickets (see para 514) should be examined to see if the percentage of missing tickets is high. If so, the causes thereof should be analysed, and remedial measures suggested.

45.27 Outward goods and parcels and luggage

(a) With a view to ensure that the railway receipts are not issued in advance of the receipt of the packages, a few way-bills invoices issued on the date of inspection or on the previous day should be examined to see that either the relevant packages are on hand, or they have been correctly despatched from the station.

(b) The outward booked consignments lying on hand should be examined to see that the instructions regarding packing, marking, and labelling have correctly been observed. Similarly, the outward loaded wagons, waiting despatch, should be examined to see that they have been correctly labelled, sealed, riveted and E. P. locked as required under the rules and other instructions in force. If the case of open loaded wagons, it should further be seen that, wherever necessary, check lines have been provided on the top layer of the consignment and that they have been covered with wagon sheets and tied with ropes as per extant orders.

(c) Forwarding notes to the extent of one full working day's transactions in each office (goods, parcels and luggage) should be examined in detail vis-a-vis the relevant invoices, way-bills or luggage tickets to ensure that they have correctly been executed by the senders or their authorized agents, and that they have been completed and signed at appropriate places by the staff responsible for various operations involved in the booking and despatch of the consignment. In the case of general forwarding notes, it should be seen that they have approved by the competent authority and that they are not date expired. It should also be seen that the waybills, invoices, etc., are

being prepared legibly and correctly as per extant orders.

(d) A few consignments of goods parcels already booked and awaiting despatch should be examined with a view to detecting misdeclaration of goods.

45.28 Weighing machines and weighbridges

(a) All the weighing machines and weighbridges provided at the station should be tested to see that they are in perfect working order and are being maintained properly. It should also be seen whether the number of weighing machines and weighbridges provided is adequate to cope with the quantum of traffic dealt with at the station. The date on which each weighing machine or weighbridge was last tested by the representative of the Mechanical Department should be indicated in the Inspection Report. In case any weighing machine or a weighbridge is found defective, the Station Master should be advised to take immediate steps for rectification of the defect.

(b) At weighbridge stations, it should be seen that the wagons required to be weighed on the weighbridge are correctly weighed as per extant orders and that the weighment advice and a copy of the weighment register are regularly sent to the destination stations and the Traffic Accounts Office respectively.

45.29 Reweighment of consignments

(a) The reweighment registers should be examined' for at least one calendar month to ensure that these are being correctly maintained and that requisite percentage of inward consignments prescribed for this purpose is being correctly weighed. A few of the items recorded in the reweighment registers should be traced into delivery books to ensure that the results of reweighment have been recorded therein and undercharges, wherever due, have been accounted for. Similarly, a few of the telegraphic messages received from weighbridge stations should be traced into the delivery books with a view to ensure that the result of reweighment has been recorded therein and undercharges, wherever due, have been accounted for.

(b) The Commercial Inspector should get at least ten outward booked consignments lying on hand re-weighed in his presence to ensure

that the booked weight was correctly shown by the staff. Similarly, ten inward consignments lying on hand, preferably those which were already reweighed by the staff at the destination station, should be got reweighed to ensure that there is no leakage of railway revenues. The result of reweighment should be recorded in the Inspection Report. The consignments on which undercharge becomes due as a result of reweighment by the Commercial Inspector should immediately be brought to the notice of the Station Master for recovery of the amount due. The result of the reweighment should also be recorded in the reweighment register and respective delivery books or unloading tally books.

(c) Similarly, five full load wagons each of outward, inward and transit goods, should be reweighed on the weighbridge, wherever provided, and further action taken as indicated in (b) above.

45.30 Inward goods and parcels and luggage

In respect of inward consignments, it would be seen that—

(i) inward way-bills invoices are taken to account immediately on receipt.

(ii) notices of arrival are issued to consignees as per extant orders.

(iii) railway receipts and freight and other charges as due are collected before effecting delivery.

(iv) collected railway receipts or indemnity notes in lieu thereof are properly preserved as per extant orders.

(v) inventory of goods and parcels is properly taken and checked by the Station Master, or any other staff authorized in this behalf, in his own handwriting; and

(vi) rules regarding disposal of unclaimed and unconnected packages are properly followed.

45.30.1 Parcel Management System

Wherever PMS is introduced in Parcel office proper functioning of PMS equipments should be ensured. Any kind of failure in connectivity or system should be recorded without fail. Sufficient spares should be made available to ensure uninterrupted parcel business.

45.30.2 Pre-payment of lease to be ensured wherever SLR or parcel vans are leased out.

45.31 Check of goods and parcels on hand. —

(a) The Commercial Inspector should take an inventory of goods and parcels on hand in the relevant register and check the same with the delivery books, unloading tally books, register of unconnected packages wagons and other relevant records. The inventory should be taken in full, in the handwriting of the Commercial Inspector himself, immediately after his arrival at the luggage and parcels office or goods sheds, as the case may be.

(b) The provision regarding taking full inventory is sometimes relaxed under the orders of the Principal Chief Commercial Manager in respect of larger stations which are notified by the railway administration for the purpose. In such cases, the Commercial Inspectors will take a partial inventory of not less than 50 consignments in each such parcels office/goods shed and check the same as indicated in (a) above. Further, the Commercial Inspector should also pick up at least 50 items of parcels goods on hand from the delivery books and/or unloading tally books and see that the consignments are actually on hand. The items so checked will be identified in the respective delivery books/unloading tally books and also recorded in the inventory books.

(c) A few inward consignments of goods' parcels lying on hand should be examined to see that they have not incorrectly described with a view to securing benefit of lower rates or booking against restrictions.

(d) A few items of left luggage on hand in Cloak Room should be checked with reference to the relevant record foils of left luggage tickets to check their correctness.

45.32 Recovery of wharfage and demurrage charges accrued

(a) In order to ensure that wharfage and demurrage charges are being correctly levied, the Commercial Inspectors should check—

(i) wagon transfer registers in detail for 10 days transactions and trace the amount of demurrage charges due in the cash books.

(ii) at least 50 entries subject to a maximum of five days transactions in the wagon exchange book with the relevant placement/release memo and the wagon transfer registers in respect of correctness of the time of placement and release.

(iii) delivery books in detail for 10 days' transactions and trace the amount of wharfage charges due in the cash books.

(iv) unloading tally book for two days transactions with the delivery books in respect of dates of arrival and availability for delivery.

(v) dates of removal as entered in the delivery book with the relevant gate passes and the register of goods passed out (see para 1857), wherever the gate pass system is in force.

(b) The dates for which the above transactions are checked should be indicated in the Inspection Report.

45.33 Station outstanding

(a) The station outstandings in the closed period preceding the inspection should be examined in detail to ensure that adequate steps as per orders in force are being taken by the station staff for clearance of the outstanding specially those outstanding for more than three months.

(b) The last advice of internal check received at the station should be examined to see that all the debits and credits mentioned therein had correctly been taken into account in the station book. If any item is not found to have been so accounted, the Commercial Inspector should get the same accounted during the course of his inspection; repeated failures in this respect on the part of the station staff should be reported to the Sr. Divisional Commercial Manager.

45.34 Check of pay orders for petty claims—

At stations, where Station Masters are authorized to issue pay orders in respect of petty claims, it should be seen that the relevant record for settlement of claims is being properly maintained and that the claims have been settled judiciously as per extant orders. Pay orders issued on four dates, subject to a minimum of 10 pay orders, should be checked in detail with the relevant record and irregularities, if

any, taken up with the staff at fault. The dates selected for this check should be indicated in the Inspection Report.

45.35 Checks for goods sheds and luggage and parcels offices

In the goods sheds and luggage and parcels offices, it should also be seen that—

(i) Accommodation provided is adequate to cope with the traffic offering at the station.

(ii) Arrangements for the safety and security of goods and parcels against theft, pilferage, damage, etc., are adequate.

(iii) Approach roads are in good condition,

(iv) Station buildings, particularly where the consignments are slacked, arc not leaky.

(v) Number of booking and delivery windows provided is adequate.

(vi) Other arrangements for booking, clearance and delivery of consignments are adequate.

(vii) Various prescribed notices particularly in relation to restrictions in booking, working and business hours, allotment of wagons, etc., are correctly exhibited.

(viii) Instructions regarding the protection of consignments from damage by wet are being properly followed.

(ix) Tarpaulins provided at the station are adequate and are maintained in serviceable condition.

(x) There is no avoidable delay in loading and unloading of traffic.

(xi) Prescribed check on gate passes., wherever in force, is correctly exercised.

(xii) Sweepings and grain and other materials are collected and correctly accounted for:

(xiii) Outward and inward summaries are prepared correctly and legibly and are properly filed.

(xiv) Efforts are made to detect mis-declaration of goods and

parcels.

(xv) Missing and damaged goods reports are submitted promptly.

(xvi) Damage and deficiency registers are maintained, and relevant advice are despatched promptly as per extant orders.

(xvii) Particulars of payment of claims are entered in the various records as per extant orders.

(xviii) A copy of the agreement for handling contracts/out-agencies sidings, wherever necessary, is available with the station master and that the terms and condition's stipulated therein are being followed and

(xix) At stations where traffic is likely to increase due to coming up of new industries, etc, in its vicinity, appropriate action has been initiated with an end in view that the additional traffic can be lifted without difficulty when the time comes.

Additional checks for goods sheds -in the case of goods sheds, it should additionally be seen that

(i) Register of invoices received (see para 1807) is properly maintained.

(ii) Priority registers (see paras 1405 and 1406) properly maintained and that the rules regarding registration of goods, allotment of wagons and collection and refund of wagon registration fee are being correctly observed.

(iii) Instructions regarding selection of wagons for loading (see para 1506) and precision to be taken when loading wagon (see para 1507) are being correctly followed.

(iv) Wagons are correctly labelled, sealed and riveted and that full use is made of the e. P. Locking system, if available at the station.

(v) Inward and outward index registers are properly maintained (see paras 1441 and 1813) regular non-receipt of invoices

from a particular station being brought out in the inspection report for necessary remedial measures; and

(vi) Invoices are regularly dispatched to the destination stations arid to the Traffic Accounts Office as per extant orders.

Note. —The check in respect of deposits and refunds of wagon registration fees should be exercised for at least four days' transactions subject to a minimum of 10 entries, the dates selected being indicated in the Inspection Report.

45.36 Repacking and transhipment sheds

In the case of repacking and transhipment sheds, it should also be seen that-

(i) Vans are being prepared in accordance with the extant orders on the subject.

(ii) There is no undue detention to wagons or consignments.

(iii) There is proper ordering of work and distribution of staff and labour.

(iv) There is proper co-ordination between the commercial and transportation staff and

(v) Working hours are adequate and proper to cope with the work involved.

45.37 Commercial Inspection Book

All irregularities noticed during the course of inspection should, as far as possible, be set right on the spot. On completion of the inspection, the Commercial Inspector should enter in brief detail, in the Commercial Inspection Book, the particulars of irregularities noticed, together with instructions and suggestions for avoiding repetition of such irregularities. At the time of the next inspection, the Commercial Inspection Book should be called for and perused to see that the instructions have been complied with by the staff.

45.38 Commercial Inspection Report

(a) After completing the inspection, and as far as possible before leaving the station, the Commercial Inspector should fill in the Inspection Report in the prescribed form as notified by the railway administration. These Inspection Reports are normally

in the form of a questionnaire embodying the points meriting special attention during the course of inspection. Any other point of commercial importance requiring attention of the higher authorities should be indicated on separate sheets, which should be stitched with the Inspection Report.

(b) A detailed statement of undercharges detected during the course of inspection should be prepared in triplicate, by carbon process, showing fall particulars of the undercharges, as also their remittances and the name of the staff responsible for the same. If the amount is not made good before the inspection is completed, remarks of the staff responsible for the undercharges should be obtained and attached with the statement. All three copies of the statement should be submitted to the Sr. Divisional Commercial Manager, who will arrange to forward two copies of the same to the Traffic Accounts Office for verifying accounts of the undercharges or raising debits, as the case may be. The third copy of the statement will be retained in the Divisional Office along with the relevant Inspection Report.

45.39 Submission of the Commercial Inspection Reports

The Commercial Inspection Reports should be submitted by the Commercial Inspectors to the Divisional Office immediately after the completion of the inspection. As the serious irregularities pointed out in the Inspection Reports, as also the outstanding Inspection Reports awaited from the Commercial' Inspectors for the inspection completed by them, are discussed in the monthly commercial meetings, the Commercial Inspectors should be punctual in the submission of the Inspection Reports to the Divisional Office lest the efficiency of their working be commented upon adversely.

45.40 Accounts Inspections

The earnings of railways are chiefly derived from the transport of

passengers and merchandise traffic and are realized through the agency of stations. The main headings under which these earnings are classified are 'coaching', 'goods' and 'sundries'. To ensure that income on account of the services rendered by the railways is properly and correctly accounted for and remitted by station's, internal checks and test checks are exercised in the Traffic Accounts Office, on the basis of returns and documents submitted be stations at specified intervals as laid down in this Manual or as notified separately by individual railway administrations. These checks cannot by themselves eliminate the possibility of frauds, defalcation; and malpractices resulting in leakage of railway revenues, unless supplemented by regular vigilant and effective 'on the spot' cheeks over the initial records and documents at stations specially those which are not made available to the Traffic Accounts Office at the time of internal checks. These 'on the spot' checks are conducted periodically by the Inspector of Station Accounts in-charge of the section. The object of such 'on the spot' checks is also to ensure that the returns rendered by the stations to the Traffic Accounts Office reflect the true state of accounts on the basis of the initial documents maintained at the stations.

In addition to the periodical inspections by the sectional Inspectors of Station Accounts, inspections are also conducted by the Accounts Officers and the Inspectors of Station Accounts attached to the Traffic Accounts Office, Further, the initial books and documents as also other records maintained at the stations are also subjected to checks by the officials of the Audit department.

The periodicity and the extent of checks by the officials of the Accounts and Audit departments are determined by their respective Heads of Department and these are not divulged to the station staff. It is, therefore, incumbent upon the Station Master, as also his subordinates to extend full co-operation to the inspecting officials. It is the duty of the Station Master to ensure that all books and other

records maintained at the station are always kept posted up to date. It will be appreciated that the arrear in the accounts work at the station tends to hamper the progress of the inspection.

All the books, documents, correspondence, and cash vouchers on hand, as also the unconnected and undelivered consignments and other records maintained at the station, should be made available to the inspecting officials as and when demanded by them. Similarly, clarification in relation to any transaction sought by the inspecting officials should be given to them promptly.

Undercharges or other short remittances pointed out during the course of the inspection should be made good on the spot. In case the Station Master feels that the debit pointed out is not correct, he should bring it to the notice of the inspecting officials, quoting reference to the tariffs or any other authority in support of his arguments. In the case of a difference of opinion between the Station Master and the inspecting official in regard to the interpretation of a particular rule, the matter should be referred to appropriate higher authorities.

(a) Irregularities noticed by the inspecting officials will, as far as possible, be brought to the notice of the Station Master at their earliest through irregularity statements. It is the duty of the Station Master to obtain the explanation of the staff responsible for each such irregularity in the irregularity statement itself. He should also ensure that the explanations given by the staff are brief and to the point, quoting reference to rules and instructions, wherever necessary.

(b) Irregularity statements bearing observations of the Station Master against such item in the statement should be returned to the inspecting official before he leaves the station after completion of the inspection.

The Station Master should make it a point to seek clarification from the inspecting officials on any points of doubt in relation to the accounting matters. He may also discuss with them the maintenance

of accounts in general to see if any steps for streamlining the procedure at his station are necessary to bring about an all-round efficiency.

45.41 Accounts Inspection Book

A separate Inspection Book should be maintained at each station for the officials of the Accounts and Audit Departments. Brief particulars of the irregularities noticed during the course of the inspection as also instructions and suggestions, if any, for eliminating the repetition of such irregularities will be recorded by the inspecting officials, whenever considered necessary, in the Inspection Book. It is the duty of the Station Master to see that the irregularities pointed out and the instructions recorded in the Inspection Bock are noted by all the staff particularly those who are directly concerned with them, the Station Master should also ensure that the instructions recorded in the Inspection Book are subsequently acted upon by the staff concerned.

The Officers and Inspectors of the Commercial Department, while at a station, should call far the Accounts Inspection Book to see that the instructions have correctly been noted and that the irregularities pointed out therein are not being repeated.

The purpose of inspection should not be fault finding but to look for the scope for system improvement.

LOSS, FRAUDS AND EMBEZZLEMENT

(REPORTING AND INVESTAGATION OF LOSS OF CASH, STORES OR OTHER RAILWAY PROPERTY)

46

46.1 Responsibility for Losses

Every public officer should exercise the same vigilance in respect of public expenditure and public funds generally as a person of ordinary prudence would exercise in respect of the expenditure and the custody of his own money. Means should be devised to ensure that every railway servant realises fully and clearly that he will be held personally responsible for any loss sustained by Government through fraud or negligence on his part and also for any loss arising from fraud or negligence on the part of any other railway servant to the extent it may be shown that he contributed to the loss by his own action or negligence.

46.2 Report of Losses

Any defalcation or loss of cash, stores or other property belonging to Government should be reported immediately it is discovered to the head of the division or department as the case may be, and in serious cases to the General Manager also, copies of the reports being sent simultaneously to the Financial Adviser and Chief Accounts Officer who will forward a copy to the Chief Auditor. If any irregularity or loss is detected by or is

brought to the notice of the Accounts Officer in the first instance, it will be his duty to apprise immediately the administrative authority concerned of the facts of the case and ask for a proper investigation; the Accounts Officer will send a copy of his communication on the subject to the Chief Auditor. If, however, the irregularity or loss is discovered by or is brought to the notice of the administrative authority in the first instance, that authority should immediately report the matter to the Accounts Officer, who will forward a copy of the report to the Chief Auditor. Petty cases, that is cases involving losses not exceeding Rs. 500 each need not be reported to the Financial Adviser and Chief Accounts Officer nor by him to the Chief Auditor unless there are important features which require detailed investigation and consideration. Every important case involving loss of cash, stores, or property, whether caused as a result of frauds perpetrated or negligence shown by the railway servants, or caused purely by accidents such as fire, etc., should be brought to the notice of the Railway Board by the General Manager through a preliminary report (to be followed by a detailed report see Para 26.3) within six weeks from the date of detection of the loss and a copy of the report endorsed to the Chief Auditor simultaneously through the Financial Adviser and Chief Accounts Officer. When the loss involved does not exceed Rs. 50,000 the case need not be reported to the Railway Board unless it represents unusual features or reveals serious defects in procedure.

The preliminary report, which should be based on the facts and first-hand information available, should bring out-

(i) the nature of the loss,
(ii) whether the matter has been reported to Civil/GR Police/RPF and Departmental Enquiry Committee.
(iii) amount involved, actual or approximate.
(iv) steps taken to plug the loopholes, if any; and
(v) the name of the staff apparently responsible.

46.3 General Manager's detailed report should clearly bring out-

(a) the amount involved and recovered,
(b) the modus-operandi of the fraud,
(c) the nature of checks which ought to have been exercised under any rule or order and which were omitted, thereby

facilitating the fraud.

(d) whether the procedure in force is ineffective in preventing such frauds and, if so, what modification are suggested therein,

(e) disciplinary action taken against the party at fault and the adequacy or otherwise of such action,

(f) whether the Financial Adviser and Chief Accounts Officer agrees to the reports submitted. In the case of his disagreement with the administration on any aspect of the case such disagreement should be reported verbatim to the Railway Board.

The detailed report should be accompanied by Police Report and the findings along with a copy of the proceedings of the Departmental Enquiry committee in all cases involving more than Rs. 50,000 and should contain comments of the railway Administration on all points brought out by the enquiring officer(s). The proceedings of the Enquiry Committee need not, however, be sent to Railway Board where the losses do not exceed Rs. 50,000 but instead these cases, on finalisation, be put up for review by a committee of two Deputy heads of Departments (including a Deputy Chief Accounts Officer) and the Board furnished with (i) the main gist of the recommendations of the Enquiry Committee, (ii) special features brought to light in the report of enquiry and (iii) the result of review indicating, inter-alia, the detail of action taken by the railway administration.

46.4 Losses involving the Reserve Bank

Whenever any case of loss, in which there is a possibility of the Reserve Bank being made liable to Government either in respect of operations on Government Accounts conducted by itself or by its agents or otherwise, comes to notice, a report of the loss should also be made, without delay, to the Railway Board. On receipt of the report, the Railway Board will arrange to have the facts examined, while they are fresh, by officers of the Bank and of Government with a view to reaching an amicable settlement or, if this is impossible at least to clearing the ground as far as possible, so that a stated case may be referred to some outside arbitrator or legal authority. This examination will be undertaken at once and

independently of any departmental or police inquiry.

46.5 Investigation of Losses

It is of the greatest importance to avoid delay in the investigation of any loss due to fraud, negligence, financial irregularity, etc. Should the administrative authority require the assistance of the Accounts 0fficer in pursuing the investigation, he may call on that officer for all vouchers and other documents that may be relevant to the investigation, and if the investigation is complex and he needs the assistance of an expert Accounts Officer to unravel it, he should apply forthwith for that assistance to the General Manager who will then arrange with the Financial Adviser and Chief Accounts Officer for the services of an investigating staff. Thereafter, the administrative authority and the accounts authority, will be personally responsible, within their respective spheres, for the expeditious conduct of the inquiry.

46.6 Legal Advice

In any case in which it appears that recourse to judicial proceedings is likely to be involved, competent legal advice should be taken as soon as the possibility emerges. In the case of losses involving a reasonable suspicion of fraud or the criminal offence, a prosecution should be attempted unless the legal advisers consider that the evidence available is not such as will secure a conviction. The reasons for not attempting a prosecution should be placed on record in all such cases.

46.7 Laxity of Control

In cases where loss is due to delinquencies of subordinate officials and where it appears that this has been facilitated by laxity of supervision on the part of the superior officer, the latter should also be called strictly to account and his personal liability in the matter carefully examined.

46.8 Recoveries of Losses

The question of enforcing pecuniary liability should always be considered as well as the question of other forms of disciplinary action. In deciding the degree of the railway servants, pecuniary

liability it will be necessary to look not only to the circumstances of the case but also the financial circumstances of the railway servant, since it should be recognized that the penalty should not be such as to impair the railway servant's future efficiency.

46.9 In particular if the loss has occurred through fraud, every endeavour should be made to recover the whole amount lost from the guilty persons, and if laxity of supervision has facilitated the fraud, the supervising officer at fault may properly be penalised either directly by requiring him to make good in money a sufficient proportion of the loss, or indirectly by reduction or stoppage of his increments of pay.

46.10 It should always be considered whether the value of Government property or equipment lost, damaged, or destroyed by the carelessness of individuals entrusted with their care should not be recovered in full up to the limit of the railway servant's capacity to pay.

46.11 Withholding of Pension and Provident Fund Bonus

One reason why it is important to avoid delay (paragraph 1105) is that in the course of a prolonged investigation, Government servants who are concerned may qualify for pension and a pension once sanctioned cannot be reduced or withheld for misconduct committed prior to retirement. As a primary precaution, steps should be taken to ensure that a railway servant concerned in any loss or irregularity, which is the subject of an inquiry, is not inadvertently allowed to retire on pension while the inquiry is in progress. Similar precaution should be taken in the case of a person entitled to the benefits of the State Railway Provident Fund. Accordingly when a railway servant is concerned in any irregularity or loss, the authority investigating the case should immediately inform the Accounts Officer and the administrative authority concerned and it will be the duty of the latter to make a note of the information and to see that pension is not sanctioned or the

Provident Fund Bonus is not allowed to be withdrawn before either a conclusion is arrived at as regards the railway servant's culpability or it has been decided by the sanctioning authority that the result of the investigation need not be awaited.

Note. - In sanctioning the pension of a railway servant, who is involved in any loss or irregularity which is the subject of an inquiry, the provisions of Rule 2308 of the Indian Railway Establishment Code, volume II and Government of India's decision under Rule 2534 of the same Code reproduced in Appendix XXX thereof should be borne in mind.

46.12 The fact that persons who were guilty of frauds or irregularities have retired and have thus escaped punishment, should not be made a justification for absolving those who are also guilty but who still remain in service.

46.13 Police Investigation

As soon as a reasonable suspicion exists that a criminal offence has been committed, the senior officer of the department concerned present in the station will report to the District Magistrate and ask for a regular police investigation under the Code of Criminal Procedure.

Note- Cases of corruption and malpractice have to be referred to the Chief Vigilance officer/ Vigilance Officer of the Railway Administration/ Organisation and if there is no such officer, to the Vigilance Directorate of the Railway Board. The Chief Vigilance Officer/Vigilance Officer /Vigilance Directorate will, in keeping with the instructions on the subject, refer to the Special Police Establishment such of these cases as require investigation by them. As a rule, allegations involving offences of bribery, corruption, forgery, cheating, criminal breach of trust, falsification of records or other serious criminal offences or those requiring expert Police investigations such as cases of possession of disproportionate assets or cases in which a number of non-official witnesses are to be examined, should be referred to the Special Police Establishment for investigation. In such cases a prompt reference to the Special Police Establishment is necessary to guard against the possibility of material evidence being tampered with or destroyed. Once a case is referred to and taken up by Special Police Establishment for investigation, further investigation must be left to them. Parallel investigation by the administrative authority should be avoided. There would, however, be no objection to investigations being undertaken by the administrative authority to deal with ancillary matters like examination of existing procedures having a bearing on the cases under investigation by the S. P. E Further action on the main case should be taken by the department on the completion of the investigation by the S.P.E. and on the basis of their report. However, in the event of delay in completion of investigations by the S. P. E., the department also should move the appropriate authorities to have the finalization of the cases by the S. P. E. expedited.

46.14 If the District Magistrate agrees that an investigation may be made, the Senior Officer of the department concerned present in the station will (a) request the District Magistrate to arrange for the investigation to proceed from day to day ; (b) see that all witnesses and documents are made available to the investigating Officer, and (c) associate with the investigating officer an officer of the department who is not personally concerned with the irregularity leading up to the loss, but who is fully cognizant of the rules and procedure of the office in which the loss has occurred.

46.15 Prosecution

When the investigation has been completed, an officer of the department (accompanied by the officer who attended the investigation) must be made available for conferences with the authority who will decide whether a prosecution should be instituted. If it is decided not to prosecute, the case must be reported through the usual channel to the General Manager for orders.

46.16 If it is decided to prosecute, the departmental representative will ascertain from the prosecuting officer, having regard to the engagements of the prosecuting staff and the state of work in the Court which would ordinarily hear the case, whether it is necessary to move the District Magistrate to make special arrangements for speedy trial, and will request the prosecuting officer to make any application that he may think necessary.

46.17 Witness

When the case is put into Court by the Police, the Senior Officer of the department concerned present in the station will see that all witnesses serving in the department and all documentary evidence in the control of the Department, are punctually produced, and will also appoint an officer of the department (preferably the officer who attended the investigation) to attend the proceedings in Court and assist the prosecuting staff.

46.18 Appeal against Acquittals

If any prosecution results in the discharge or acquittal of any person, or in the imposition of sentences which appear to be inadequate, the Senior Officer of the department concerned will at once consult the State Government concerned as to the advisability of instituting further proceedings in revision or appeal, as the case may be, and if the State Government is of opinion that further proceedings are necessary, the State Government shall direct the Public Prosecutor to proceed in the matter. Appeals against acquittals if advised by the state Government should be made only after obtaining the order of the General Manager.

46.19 Reports to the General Manager

The Senior Officer of the department concerned present in the station will see that, in addition to the reports required under paragraphs 26.2 and 26.15 above, prompt reports are submitted to the General Manager through the usual channel regarding-

(a) the commencement of a police investigation,
(b) the decision to prosecute in any particular case,
(c) the result of any prosecution,
(d) the decision to proceed further in revision or an appeal in any case,
(e) the result of any proceedings in revision or appeal.

46.20 Notwithstanding anything contained in the foregoing paragraphs, the senior Officer of the department concerned present in the station may, if he thinks fit, refer any matter through the usual channel for the orders of the General Manager before taking action.

46.21 Where fraud or embezzlement of Government funds has occurred, the institution of criminal proceedings should not be regarded by the officer responsible as absolving him from the often-laborious task of conducting immediately a thorough departmental inquiry. The natural reluctance to hold an inquiry, enhanced by an apprehension that it may prejudice the result of the trial in a Court of law, has sometimes led to great delay in taking departmental

proceedings and the results have been inconclusive. Departmental inquiries should not be delayed pending decision of criminal cases, as at a later stage, the evidence might disappear, and the departmental inquiry could not be brought to any conclusion at all. (Also refer to the Note under para–26.13).

46.22 Prosecution should be the general rule in all those cases which are found fit to be sent to Criminal Court after investigation and in which the offences are of bribery. corruption or other criminal misconduct involving loss of substantial public funds. In such cases, departmental proceedings should not precede prosecution. In other cases, involving less serious offences or involving malpractices of a departmental nature, departmental action only should be taken, and the question of prosecution should generally not arise. Whenever, however, there is unresolved difference of opinion between the Central Bureau of Investigation and the administrative authority concerned as to whether prosecution in a court or departmental action should be resorted to in the first instance, the matter should be referred to the Railway Board who will consult the Central Vigilance Commission for advice.

46.23 Where a number of persons are involved, one or more criminally, and others in such circumstances as to show negligence, or warrant the suspicion of criminal abatement without sufficient proof to justify prosecution, or have similar features which necessitate, a criminal prosecution of one or more and a departmental inquiry against others, the neglect to institute a formal departmental inquiry, or to carry it to the requisite stage, before criminal proceedings are taken, has the result that many month later, when the criminal case is over, effective departmental action becomes impracticable. The administrative authority concerned should therefore decide on the basis of the facts and records of each case how far and in what cases he can proceed departmentally at

once against the subsidiary offenders. Care should also be taken to ensure that as far as possible the offenders are not transferred to another Railway till after the finalization of the criminal/ departmental proceedings against them.

In some cases where action is required against subsidiary offenders it may be possible to take suitable action without assuming or even referring to the guilt of the principal offender and without pre-judging the issues before the Court. For this purpose, the authorities may find that the evidence already available is sufficient and, in any case, they may retain copies (Photostat copies if necessary) of such documents as may have to be put in Court. If action is taken accordingly and it is found later that there is a divergence in the penalties imposed by the Court on the principal accused and those imposed by the departmental authorities on the subsidiary offenders, further departmental action can be taken to suitably revise the penalties already imposed.

46.24 The proceedings contemplated in these instructions are those which are regulated by the rules in Appendix XVII to the Indian Railway Establishment Code, Volume I. Where action is taken under the Public Servants (inquiries) Act, XXXVII of 1850, this ordinarily takes the place of a criminal prosecution as regards the person or persons accused; but the procedure as regards other persons involved, against whom this Act is not employed should be in accordance with the instructions given above.

PART IV:
PUBLIC RELATIONS
AND MEDIA MANAGEMENT

INTRODUCTION OF PUBLIC RELATIONS

47

The Public Relations function of any Government, business or any other organization is most important. In the current world, information is power, and it is to be managed with a lot of caution and sincerity to create good image in public. Since the last two centuries, Public Relations has taken a new role and unless an organization has good Public Relations, it can't succeed in its objective. Public relations are also a sign of a civilized society. Now a days, no endeavour is successful till it is supported by good public relations.

Thomas Jefferson (1807) used the phrase "Public relations" in the place of "State of thought" while writing his seventh address to the US Congress. In India, Great Indian Peninsular Railway Company Limited (GIP Railways) carried on publicity in Public Relations campaign in England for promote tourism to India through mass media and pamphlets. During the time of First World War a central publicity board was set up at Bombay (now Mumbai) for disseminating war news to the public and press. After Second World

War the Public Relations activity gained importance as both private entities as well as Governments started Public Relations campaigns.

In the beginning of 20th century, during First World War, it was thought to move the public sentiment, and a Public Relations function was started in the defense ministry in the British Government. With success of the same, several other departments had established Public Relations division. Finally in the year 1939, a regular Ministry of Information was established in the British Government. Further, in 1946, a centralized and compact office of the information had been set up to grant publicity and information of the various central government departments to the public. Earlier, Public Relations was managed by the officers from Defense Ministry later they have been managed by officers of civil services.

In Imperial India, Public Relations organization had been borrowed from England and after the first world war, a Central Bureau of Information was set up for the regular publicity and propaganda of the Government. Initially, this bureau was placed under the Home Department and in 1939, a Director General of Information was appointed and given the charge of publicity and information including war publicity.

In October 1941, The Department of Information and Broadcasting was created and all the publicity divisions and organization working under different ministries and departments were brought under this department. The All-India Radio, which was set up in 1936 was also brought to function under this department. After Independence of the country, this department was reconstituted and designated as Ministry of Information and Broadcasting.

47.1 Definitions of Public Relations

The Encyclopedia Americana defines the public relations as **"the art of analyzing, influencing and interpreting a person, idea,**

group or business so that he or it will be recognized as serving the public interest, and will benefit from so doing". M.C. Camy defines public relation as **"Public relations in government is the composite of all the primary and secondary contacts between the bureaucracy and the citizens and all the interaction of influences and attitudes established in these countries."** According to John D. Millet, **"Public Relations is knowing what the public expects and explaining how administration is meeting these desires."**

> "Public Relations is the deliberate, planned, and sustained effort to establish and maintain mutual understanding between on organization and its publics." **- Institute of Public Relations, USA**
>
> "Public relations are the attempt by information persuasion and adjustment to engineer public support for an activity, cause, movement or institution."
>
> **- Edward L. Bernays**
>
> "Public Relations is a combination of philosophy, sociology, economics, language, psychology, journalism, communication, and other knowledges into a system of human understanding."
>
> **- Herbert M. Baus**
>
> "Merely human decency which flows from a good heart."
>
> **- Charles Plackard**
>
> "Good performance, publicity appreciated because adequately communicated."
>
> **- Fortune (Magazine)**

"Public Relations is Dale Carnegie - winning friends and influencing people – writ large."

- Robert Heibroner

"Everything involved in achieving a favourable opinion."

- George F. Meredith

Former President of the American Public Relation Association

"The Management function which gives the same organized and careful attention to the asset of goodwill as is given to any other major asset of business."

- John W. Hill

"Public Relations is distinctive management function which helps establish and maintain mutual lines of communication, understanding, acceptance and cooperation between an organization and its publics; involves the management of problems or issues; helps management to keep informed on and responsive to public opinion; defines and emphasizes the responsibility of management to serve the public interest; helps management keep abreast of and effectively utilize change, serving as an early warning system to help anticipate trends; and uses research and sound and ethical communication as its principal tools."

- Rex F. Harlow

The goodwill to the Public Relations agency is very essential to get the co-operation and support of the people and it can be built up, as Dr. L.D. White says by showing courtesy and sympathy to the people.

"The simplest way of describing the function of public relations and publicity in modern administration is to say that they are concerned with the study of the human factor in industry and, to an increasing degree, in government".

J.H. Brebner

"Public relations may be defined as **those aspects of our personal and corporate behaviour which have a social rather than private and personal significance."**

Harwood L. Childs

"Public relations mean **the development of cordial, equitable, and therefore mutually profitable relations between a business, industry, or organization and the public it serves."**

W.T. Parry

Public Relations is **"the process whereby an organization analyses the needs and desires of all interested parties in order to conduct itself more responsively towards them."**

Rex Harlow

"Public relations involve a flow of information and understanding not alone from the agency to the public, but from the public to the agency."

W.B. Graves

From the above definitions, itis concluded that the aim of Public Relations is not only to inform the public and to know what the public wants, but also to build up popular goodwill for the administrative machinery.

It is always to distinguish the public relations from publicity and propaganda. The chief aim of Public Relations is to disseminate to the public, the information about the government's policies and work and to know the reactions of the public in relation to those policies. In other words, the Public Relations embraces all activities designed to inform the public regarding the operations of the government and informing the government about what the public thinks and desires.

47.2 Need for Public Relations

Investing on Public relations will help the organisation to achieve its objective effectively and smoothly. Public Relations is not creating good image for a bad team.

Since false image cannot be sustained for a long time. Though the organisation product or services are good it need an effective Public Relations campaign for attracting, motivating the public to the product or service or towards the purpose of the programme. It is not only encouraging the involvement from the public and also resulting in better image.

Effective Public Relations can create and build up the image of an individual or an organisation or a nation. At the time of adverse publicity or when the organisation is under crisis an effective Public Relations can remove the "misunderstanding" and can create mutual understanding between the organisation and the public.

47.3 Functions of Public Relations

1. Public Relations is establishing the relationship among the two groups (organisation and public).
2. Art or Science of developing reciprocal understanding and goodwill.
3. It analyses the public perception & attitude, identifies the organisation policy with public interest and then executes the programmes for communication with the public.

47.4 Elements of Public Relations

1. A planned effort or management function.
2. The relationship between an organisation and its publics
3. Evaluation of public attitudes and opinions.
4. An organisation's policies, procedures, and actions as they relate to said organisation's publics.
5. Steps taken to ensure that said policies, procedures and actions are in the public interest and socially responsible.
6. Execution of an action and or communication programme.
7. Development of rapport, goodwill, understanding and acceptance as the chief end result sought by public relations activities.

Courtesy: Raymond Simon, Public relations: concepts and practices, 2nd ed. (Columbus, O.Grid, 1980), pp 9, 11.

47.5 The Components and Tools of Public Relations

"Public"

A group of similar individuals; an assortment of persons having the same interests, problems, circumstances, goals; it is from such persons that opinion emanates.

Public is a varied creature; it comes in many forms and sizes. Public has a multitude of wants and desires; it has its likes and dislikes, sometimes, strong likes and strong dislikes.

Employers make for a public and employees another public; the government is a public and citizens constitute another public, and so on, each of these groups is a public of the sort, tries to attract a different audience with its own tools and techniques.

"Relations"

Human wants to create the need to establish relations with one another. The representative wants of the individuals will profoundly affect their relationship. To understand any relationship, therefore, one must understand the wants of those involved.

'Relationships are of all possible types. We have relationship by ran- superior to inferior, inferior to superior, and equal to equal. We have relationship by sentiment-benevolent, Friendly, suspicious, jealous, hostile.

A relationship may be active, or it may be passive it may be good, or it may be bad, or it may be neutral. At any rate, the relationship is there to be accepted, ignored, or altered, as desired.

Propaganda:

Propaganda is the manipulation of symbols to transmit accepted attitudes and skills. It describes political application of publicity and advertising, also on a large scale, to the end of selling an idea cause or candidate or all three.

Campaigns:

These consist of concerted, single-purpose publicity programme, usually on a more or less elaborate scale, employing coordinated publicity through a variety of media, aimed, at a number of targets, but focussed on specific objectives. A campaign objective may be the election of a candidate, the promotion of political cause or issue, the reaching of a sales goal, or the raising of a quota of funds.

Lobbying:

It entails the exertion of influence, smooth and measured pressure on other, exercise of persuasion cum-pressure. In essence, it means a group putting its points of view forward in an attempt to win the other groups support.

47.6 Some Possibilities that would call for Public Relations

Promotional Opportunity:

To inform the new service / policy which call for Public Relations to make wider publicity.

Competitive:

To overcome the resistance (pre-set mind condition).

Controversy:
To eliminate the contradictory conditions in between the organisation and the public.
Adverse publicity:
To inform the truth or correct issues and thereby removing the misunderstanding.
Catastrophe:
Announcement of any unfavourable issues.
Crisis:
Whenever threats arise.

47.7 Public Relations in Government

Public relations role in government:
The Government public relations contribute to:

1. Implementation of public policy.
2. Assisting the news media in coverage of government activities.
3. Reporting the citizenry on agency activities.
4. Increasing the internal cohesion of the agency.
5. Increasing the agency's sensitive to its public's.
6. Mobilisation of support for the agency itself.

Public Relations for Government (objectives and organizations)
National Objectives:
The basic function of the government Public Relations department / agencies is to provide information, education/instruction to the citizens. The effort should also motivate the people directly or indirectly, to discharge these functions in a meaningful and purposeful manner, it is necessary that the Public Relations Department / wing should be clear about the broad objectives which guide their work.

The national objective should be non-political, non-controversial, and on which there should be a national consensus. The objectives should further the interests and the well-being of the public as a whole and promote the many sided development of the country. The objectives should be long term ones and need not necessarily change with political vagaries.

47.8 The difference of Public Relations with Publicity

The two terms 'Public Relations' and 'Publicity' are quite often confused and used for the same purpose, but it is not so. According to J.H. Brebner, the difference between public relations and publicity lies in the technique of their approach. Publicity has been defined "as the art of dealing with the people in mass" while public relations deal with the individuals. Some Governments designate their Public Relations officers as Publicity officers. No doubt, the two terms are so intimately intertwined that they are not two different functions, but two aspects of the same thing. Thus, conveying information to the people in mass is publicity and approaching the individuals is the public relations. Many writers use the term 'public relations' in the generic sense covering individual as well as mass relations. Used in this sense, publicity becomes a branch of public relations.

PUBLIC RELATIONS MANAGEMENT IN GOVERNMENT OF INDIA

48

Information is power. It is also an input for knowledge and development. Dissemination of information to the public, particularly in a democratic society, has assumed great importance in the modern world. Every authority, in the past has made use of the information system not only for its own survival but also for keeping the public informed about its activities. There is little we can do without information. The importance of public information was underlined in the early 19th century by Thomas Jefferson, the third President of the United States. He believed it was the government's duty to furnish the citizens with full and correct information. Pandit Jawaharlal Nehru, the first Prime Minister of independent India laid emphasis on "the free flow of information from the government to the governed for the successful functioning of democracy".

48.1 Ministry of Information and Broadcasting

After independence (1947), the Indian government set up a full-fledged Ministry of Information and Broadcasting (I&B).

This was a revolutionary measure in the reorganization of the information and public relations set up of the Central Government. Once the department was designated as Ministry, its status was enhanced. It was also entrusted with the control of the information and public relations activities of various other departments in the Central Government. The Ministry of I & B being a nodal agency has since developed a vast network of its mass media units with regional and branch offices as well as field publicity units at the grassroots level. These serve as the public relations agencies for the Central Government.

48.2 Functions

The objectives of the Ministry of I & B have been elucidated in its Annual Report 1991-92, as being "to inform, educate and entertain the people". The media units of the ministry seek to create a climate of awareness, guide the directions of development, and ensure peoples' participation in the implementation of policies, plans and programmes of the GOI. These objectives of the ministry are sought to be achieved through its media units like All India Radio (AIR), Doordarshan Kendra (DDK), Press Information Bureau (PIB), Directorate of Advertising and Visual Publicity (DAVP) and others. The functions of media units or public relations departments in Central Government are broadly divided into two categories:

a) dissemination of information to the public on various policies, programmes and achievements of the department concerned through different media of communication.
b) making an objective assessment of public reactions to the policies and programmes of government as the latter are reflected in the newspapers, legislative forums and through direct interaction with the opinion leaders; and keeping the department informed of people's reactions for adjustment of policies if any.

48.3 National Objectives

Besides providing information, education and entertainment, mass media in a democratic set up are required to fulfil the following

needs:

1) to help preserve and strengthen the democratic way of life by inculcating faith among people in democratic institutions like judiciary, fair elections, secular character of state etc.:
2) to motivate people, directly or indirectly, and involve them in development activities,
3) to publicize nationally accepted themes such as:
    i) planned development through the application of Science and Technology.
    ii) national integrity and unity.
    iii) family welfare and population control.
    iv) improved methods of agricultural production.
    v) spread of literacy:
    vi) eradication of social evils like alcoholism, dowry etc.
    vii) citizen's need-oriented programmes: such as for farmers, for the control of prices of essential commodities, for employment opportunities etc.
    viii) promotion of savings:
    ix) any other subject mentioned in the Directive Principles of the Constitution.

48.4 Organization and Structure

Main Secretariat: The Ministry of 1 & Broadcasting consists of a Secretariat, the eleven attached Media Units and the Indian Institute of Mass Communication for Advanced Study, Training and Research in Mass Media.

These media units are:

1) All India Radio.
2) Door darshan.
3) Press Information Bureau.
4) Publications Division.
5) Research and Reference Division.
6) Directorate of Advertising and Visual Publicity.
7) Registrar of Newspapers for India.
8) Directorate of Field Publicity.
9) Photo Division.

10) Song & Drama Division.
11) Films Division.

There is no executive department for each medium of communication under the Ministry (See Chart of the organizational structure of the Ministry of 1 & B given below). The Ministry is also associated with autonomous bodies like the National Film Development Corporation (NFDC). The National Centre of Films for Children and Young People (NCFCYP), the Film and Television Institute of India (FTII), National Film Archives of India (NFAI), Directorate of Film Festivals. Central Board of Film Certification, and Indian Institute of Mass Communication (IMC).

External Publicity:

India's external publicity is handled by the External Publicity Division of Ministry of External Affairs in close cooperation with the Ministry of I & B and other departments of GOL. External publicity is important for:

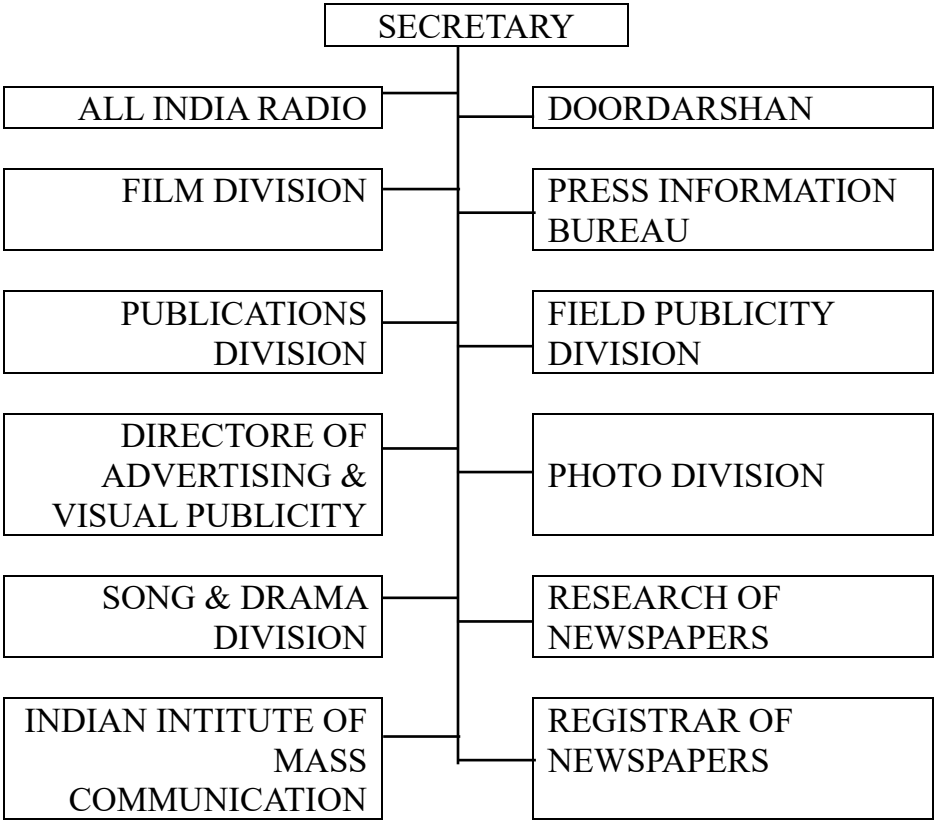
- Projecting the correct image of the country abroad.
- Promoting understanding and support for Indian foreign policy.

This is achieved through audio-visual publicity, organization of exhibitions and cultural programmes e.g. Festival of India (in U.S.), pamphlets and other printed publicity material on India's developmental effort.

Media Units:

Though brief mention of the Ministry of I & B's Media Units has been made in earlier Blocks. we will now discuss here the organizational structure of these Media Units for a better understanding of their functioning.

ORGANISATIONAL STRUCTURE OF THE MEDIA UNITS MINISTRY OF INFORMATION AND BROADCASTING, GOVT OF INDIA



1. All India Radio

All India Radio (AIR), also known as Akashvani, is headed by a Director-General, who is assisted by several Deputy Director-Generals and a Chief Engineer. The executive functions are carried out by the 125 regional stations situated all over the country. Important divisions of All India Radio include News Services Division, Home Services, Educational Programmes, Commercial Service, External Services Division and the Audience Research Unit. AIR's Audience Research Unit provides

qualitative feedback on audience size and composition, reaction of listeners to the programmes and assessment of impact on target audiences.

AIR at present broadcasts 286 news bulletins for a duration of over 38 hrs. 35 mts, in its Home and External services. These are broadcast in 62 languages and 131 dialects in Home Services and 25 languages including 16 foreign languages over the External Services. Special bulletins are also used, during elections or during crises like floods, earthquake or other disasters, to keep citizens informed on the latest situation. External Services Division of the AIR serves as an electronic ambassador of India. The overseas broadcasts are meant to project the Indian point of view on world affairs and acquaint the overseas listener with the developments in India.

AIR also lays special emphasis on rural programmes to provide media support to the task of national reconstruction. There are 140 MW transmitters, 43 SW transmitters and 47 FM transmitters. The Radio coverage as on 31-3-1992 was 85 per cent by area and 95.7 per cent by population.

2. Doordarshan

Started in 1959, Doordarshan bas, over the years, grown into one of the world's largest TV networks with its signals reaching about 80 per cent of the country's population. It uses a domestic satellite for dissemination of TV services. The Doordarshan network by the end of 1992 consisted of 531 Transmitters of varying power and 20 Programme Production Centres spread throughout the country. At present, the National Service is available throughout the country while the Primary Channel is based on the Regional Kendras and the four Metropolitan Kendras, namely Bombay, Delhi, Calcutta and Madras, which are called Metro Channels. With the rapid expansion of the television network in the country, the scope for video software generation for television has increased.

The Doordarshan is headed by a Director-General who is assisted by Additional-Director Generals and the Engineer-in-Chief. Each Regional Kendra is headed by a Director. Its coverage includes national programmes, news and current affairs, commercials, rural programmes, educational programmes, special campaigns of social relevance like

family welfare, promotion of savings, child immunization etc. The morning, afternoon and evening transmissions cover a variety of programmes to suit the needs of both the urban and rural population. Commercials were introduced on Doordarshan in 1976.

It is interesting to note that Doordarshan began.its telecast as in educational experiment and has since considerably expanded its educational programmes, both the syllabus oriented and enrichment type, in keeping with developmental aims. Programmes of higher education produced by UGC as well as IGNOU, are telecast on the national network. Besides this, special audience programmes for children, women, rural folk, artisans etc. are also telecast. National programmes focus on national integration, communal harmony, family welfare, art and culture, scientific innovation and current affairs. INTEXT service is provided to transmit information on stock market, train timings, air service timings, weather forecast etc.

3. Press Information Bureau (PIB)

PIB is the central agency of the GOI for dissemination of information of its policies, programines and activities. The Bureau supplies information to news agencies and the media through its countrywide teleprinter network. The Bureau's officers, who are attached to all departments, explain and interpret government policies and also help to evaluate public opinion.

The PIB disseminates information through press notes, handouts, communiques, backgrounders, features, press conferences, newsletters, conducted tours, photographs etc. For further spreading the flow of information, it is proposed to link the headquarters with all regional and branch offices through a data bank facility.

4. Publications Division

The Publications Division has established itself as the largest publishing organization in the public sector. It is headed by Director who is responsible for the production, sale and distribution of books and journals brought out by the Division to help readers to know India in its varied aspects-history, culture, economy, art, flora, and fauna. Publications include biographies of eminent persons, speeches by national leaders,

travel, and tourism material and so on. Till the end of March 1992, the Division had produced 6,400 titles in English, Hindi, and other Indian languages. The Division brings out 20 government journals in English, Hindi, and other languages for the Central Government departments.
Hindi, and other languages for the Central Government departments.
Yojana, a journal devoted to planning and development, is brought out in 12 languages. Kurukshetra, a monthly, published both in English and Hindi, on behalf of the Department of Rural Development, disseminates information on various programmes of rural development. The Employment News' in English and "Rozgar Samachar in Hindi and Urdu is the largest circulated weekly of the division.

5. Research and Reference Division

The Research and Reference Division, set up in 1950, is responsible for furnishing reference material for publicity purposes to the ministries and its various media units. The division issues backgrounders, the biographical sketches of eminent Indian and prepares a fortnightly 'Diary of Events' covering important national events. It runs documentation and research services on matters of public interest, as well as events and trends in the field of mass communication in the country. It brings out two standard and authoritative works of reference on India: "India-A Reference Annual", "Mass Media in India". The division has a Reference Library with a large collection of books on various disciplines of mass media. The Library serves 700 accredited correspondents and a large number of media personnel on government duty. It is also a one-point depository of the reports of various government commissions and committees. A National Documentation Centre for Mass Communication was created in 1976 as a part of this division for collecting, interpreting and disseminating information about the events and trends in mass communication. It brings out eight services: "Current Awareness Service", "Reference Information Service". "Bibliography Service", "Who's who in mass media", "Honours conferred on Mass Communicators", "Media Memory", "World Media Service", "Bulletin on Film".

6. Directorate of Advertising and Visual Publicity

This is a multi-media central agency for publicising policies, projects and achievements of GOI in the field of economic and social development. It caters to all departments of government (except Railways), Public Sector Undertakings (PSUs) and Autonomous Bodies in the following areas:

1) It issues regular recruitment advertisements for various departments:
2) Public awareness advertisements on different campaigns like Income Tax, Environment Protection, the Girl Child, Indian Air Force, New Economic measures, Gold Import Policy, are released in important newspapers.
3) Printed publicity material like folders, posters, brochures on various themes like Drug abuse, Solar cooker, eighth five-year plan, Nehru Rozgar Yojana, besides booklets containing speeches of the Prime Minister on important occasions like SAARC Summit etc. are also brought out.
4) Exhibitions are organized even in rural areas for the benefit of backward people and also on special occasions like Adhi Kumbh Mela or the Golden Jubilee Celebration of Quit India to create awareness.
5) The out-door publicity unit launches major campaigns on special occasions like Independence Day, Consumer Day and so on.
6) The Audio-visual cell produces and telecasts audio and video sports on various themes in various languages.
7) In addition, special campaigns are also carried out for disseminating information and publicizing themes like national integratien, communal harmony etc. on a nationwide basis.

7. Registrar of Newspapers for India (RNI)

The Registrar of Newspapers for India was set up in July 1956 to maintain statistics of newspapers in the country. It verifies and regulates the availability of titles of newspapers, registers them, verifies their circulation and brings out an annual report, 'Press in India". The Certificate of Registration is issued by this office when a new newspaper is registered under valid declaration. The

Registrar allocates newsprint to various newspapers. It has branch offices in Calcutta, Bombay and Madras.

8. Directorate of Field Publicity

The Directorate of Field Publicity (DFP) is the largest rural oriented publicity set-up. The Field Publicity Officers of this Directorate reach the people almost at their doorsteps in villages and at congregations like fairs and festivals to inform and interpret the policies and programmes of the government in local languages, dialects and provide on-the-spot elucidations.

The Directorate, headed by a Director-General, has 22 Regional Offices and 257 field units, including 72 border and 30 family welfare units, in various parts of the country. The field units have a vehicle equipped with cine-equipment and utilize both modern and traditional formats of publicity like films, song and drama programmes, oral communication and photo exhibitions. They promote national integration and mobilize public opinion in favour of welfare programmes and reinforce people's faith in fundamental national values.

The field unit is the only interpersonal media of the 1 & B ministry which acts as a two-way bridge. It also gathers people's reactions to programmes and reports back the same for appropriate action by the government.

9. Photo Division

This division is responsible for documenting photographically the growth and development of the nation in social, economic and cultural fields. It maintains a Photo library with a valuable collection of photographic negatives of major news events which are of archival value. Black and white photographs of national and international events are supplied to the PIB. Photo coverages of VIP visits, both Indian and foreign, are undertaken. It supplies photographs for both internal and external publicity. It also provides training to photographers and organizes photo contests periodically.

10. Song and Drama Division

The Song and Drama Division, set up in 1954, utilizes the traditional media for the purpose of creating awareness among the people about various national programmes of socio-economic significance. A wide

range of stage forms such as drama, dance, puppets, folk recitals and traditional plays are used for the purpose of social communication projecting developmental activities. These folk dances have the advantage of adaptability and help to establish easy rapport with the people. The division caters to the entertainment needs of the 'Armed Forces in the forward areas. There are six departmental troupes in the division located at Pune, Hyderabad, Srinagar, Delhi, Patna and Bhubaneswar. The Division has a sound and light unit each at Delhi and Bangalore. The Division also utilizes about 600 private troupes which are registered with it. It has a centre at Ranchi under Tribal Project Plan to make use of the tribal talent in Madhya Pradesh, Bihar and Orissa. The "Light and Sound" programmes have also proved to be very successful.

11. Films Division

It is the largest agency in the world devoted to production and distribution of documentaries and news magazines. It also produces films for other departments of the government e.g. agriculture, defence etc. These films are screened throughout the country through various channels and also abroad through Indian embassies and TV networks. Important national and international events are filmed as news magazines. It also caters to at least 5-6 crores of rural audience every week, producing rural based features in regional languages and dialects. Many of its productions have won national and international awards. With informational and educational films, it seeks to disseminate information on important aspects of the country's life with particular bearing on vital issues of development. On an average, the Films Division produces about 26 news magazines, and 110 documentaries, featurettes and films every year. It is estimated that about 10 crore people view these films annually.

The Directorate of Film Festivals

This was set up to help promote good cinema within the country and abroad. The directorate organises international film festivals, national film festivals, participates in film festivals abroad and gives away national film awards regularly. Special film programmes are also arranged under cultural exchange programmes or on important occasions like, SAARC meetings and so on.

48.5 National Film Development Corporation (NFDC)

NFDC undertakes a wide gamut of activities for the integrated growth of Indian cinema. Its activities include production of films, export of Indian films, import of foreign films, import and distribution of raw stock, construction of cinema theatres, production and marketing of recorded video cassettes to fight video piracy. The technical projects include setting up the latest electronic studio system with postproduction facilities at Calcutta and the setting up of the sub-titling centre at Bombay which has a full-fledged Unit with translation, checking and sub-titling facilities of high professional and technical quality. It also helps export Indian films, promotes the concept of low budget films and undertakes co-production of films and telefilms with Doordarshan.

48.6 Central Board of Film Certification

This Unit has a Chairman, and other members appointed by the Central Government. The members of this panel comprise eminent educationists, journalists, social scientists, persons connected with film production and other professionals. Since films are important in shaping public opinion they are considered powerful instruments of motivation. The Films are certified under four categories: "U", "UA", "A", "S". The Board can refuse certificates or delete portions of films for any violation of guidelines

48.7 National Center of Films for Children & Young People (NCFCYP)

Formerly known as Children's Film Society, the aim of this Society is to provide clean and healthy entertainment to children and young people. The Society has its head office at Bombay and other zonal offices at Delhi, Madras and Calcutta. It has gained recognition by organizing International Children's Film Festivals in India and participating in Film Festivals abroad. It produces and acquires short films for children and caters to both rural and urban children.

48.8 Film and Television Institute of India

This imparts technical training in the art of Film making and provides in-service training to the employees of Doordarshan, It also conducts film appreciation courses of short durations.

48.9 National Film Archives of India

This Unit has the functions of acquiring and preserving the heritage of national cinema and the best of world cinema. It classifies, documents, film data and encourages film study. It has a large collection of several silent films of early days as well as recent Indian and foreign films. It collaborates with UNESCO for organizing regional seminars for development of film archives in the Asian region.

48.10 Official Spokesperson

The Principal Information Officer, PIB is designated as a spokesman of the GoI for the purpose of briefing media on policy matters other than foreign affairs. The Information Officer attached to the ministry acts as a spokesman for that particular ministry. Spokespersons play an important role in disseminating public information to the media.

The spokesman of the government briefs the media persons after cabinet meetings. Similarly, the official spokesman conducts daily briefings if any major decision of the GoI is to be conveyed to the people. Therefore, he assumes great importance in the Information and Public Relations set up of the Central Government.

48.11 Guidelines for Government Public Relations Person

A successful Government PR person must:

1. know the functioning of the government in its entirety.
2. be familiar with the country's problems like poverty, population, illiteracy, caste, language, religious diversities etc:
3. have a clear conception of the country's socio-economic development plans, overall view of different sectors, long and short term perspectives.

4. establish a good rapport with the Press as an attractive source of information by avoiding an uncommunicative bureaucratic approach and use of administrative jargon.
5. give publicity to the government and not to individuals or political parties:
6. be fully conversant with the happenings of the department in order to be able to draft press releases and satisfy press queries in order to project the image of the government:
7. have access to all information and be provided with all facilities.
8. attend all internal meetings on policy decisions, reports, reviews or future planning projections:
9. receive all background and agenda papers, replies to parliament questions and statements on follow-up activities.
10. be able to issue suitable denials to counter distorted information or sensational reporting by the Press. And for this, being discreet helps, as too many denials lower the credibility and may prove to be counter-productive.
11. plan the date and time of press release well in advance:
12. be able to decide the fort in which information is to be released: as a press note, handout or press communique.
13. be able to make suggestions and plan in advance for holding press conferences and prepare handouts for distribution:
14. be able to release information selectively, at times, if found necessary:
15. release all information after obtaining clearance from appropriate quarters. In case any information received from a ministry is found to be in conflict with some information that has been already released by another ministry, the PR man must hold back the release and consult the concerned ministry to resolve the conflict; and
16. be able to assess the situation and accordingly provide additional information at regular intervals e.g. during elections, war, any disasters, e.g. the earthquake in Maharashtra in 1993, major accidents, riots etc. when it is important to satisfy people and reassure them. This helps to prevent panic and spread rumours.

RELEASE OF ADVERTISEMENTS IN PRINT MEDIA

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Issuance of advertisements in print media is one of the primary functions of any public relations cell under various Government Departments and also private organizations which deals with public. The public relations cell of any Government or Non-Government department has to associate with various print media organization and other agencies, who facilitate the issuance of advertisement in Newspapers and Magazines. In the Indian Railways, this function is assigned to Chief Public Relation Officer (CPRO) at the zonal railway level and ED (Information & Publicity) at Railway Board level. The Chief Public Relation Officers are well equipped in dealing with media and also having the powers and facilities to issue the advertisement as sought by the organization. There are several policy directives under which advertisements are issued to have the maximum coverage with less or minimum expenditure. The sole idea behind the public relations organization is to keep the image of the organization always high in public perception.

The job of releasing the advertisement in Newspapers, Magazines and other periodicals largely depends on the circulation of the paper or periodical, the rate of the advertisement, its standing in the market and the kind of public it has to address. If it is a general advertisement and useful to each and every customer of the railways then the advertisement is to be published in most of the newspapers with wide circulation. On other hand if it is for a select group then the advertisement is issued to select newspapers. If an advertisement of the accident enquiry by the Commissioner of Railway Safety (CRS) then advertisement must be issued to the newspapers which are circulating in that area where the enquiry is being conducted. The selection of the newspapers is a tough task for the CPRO.

A. Advertisement issued to DAVP empaneled publications

Most of the advertisements are generally released to the publications, which are on the panel of DAVP as rates are fixed by DAVP and charged on the basis of per square centi-meter. There may be a situation when advertisements are released to the newspaper on the panel of DAVP and also non-DAVP, in that case the payment is made as per DAVP rate only.

There may be situations, when a publication is having more than one edition with individual DAVP rate then the advertisement has to be in DAVP rate and if the newspaper is not accepting the condition, then advertisement shall not be issued to that newspaper unless the newspaper accept rates as per DAVP.

Generally, railway advertisements are not released to in-house railway magazines and other railway publications as it may cost the railway on the other hand. All efforts are made to such publications to be self-sufficient financially and stand up in front of the other publications without any government support.

However, there is no bar for accepting advertisements from other government and non-government organizations.

B. Advertisements issued to NON-DAVP Publications

At most of the time, the publications are generally empaneled with DAVP but there may be circumstances, when in the interest of the administration, advertisement to be issued to non-DAVP publications. Following procedures are adopted in these cases as under:

1. In such case, prior approval of General Manager of the Railway is sought.
2. The condition of issuance of such advertisement is that the monetary value of the tender advertisement must be Rs.10 crore and for image building of the railway there is no such monetary value.
3. In the case of Ad-hoc publications, new publications with less than one year of regular publishing, DAVP publications and the publications which were earlier on the panel of the DAVP but subsequently debarred/ disqualified/ suspended are not covered under the powers mentioned.
4. Display advertisements relating to inaugural functions are also not covered under the extant rules.
5. For release of advertisements to a non-DAVP publication, a rate equivalent to the DAVP rate for a similar circulation should be offered.
6. For this purpose, authentic proof of circulation should be insisted upon. The Cost/Chartered Accountant, Statutory Auditor or Audit Bureau of Circulation (ABC) may certify circulation of a publication (up to 75000). For a circulation above 75000, only the ABC certificate should be accepted.
7. In the event of non-acceptance of the equivalent DAVP rate by a non-DAVP publication, advertisement should not be released to the said publication.
8. However, if the administration is under an obligation to publish a tender advertisement in a non-DAVP publication (due to any

statutory or other requirement, non-availability of a DAVP publication in the target area, etc.),

9. If the equivalent DAVP rate offered by the Railways/Units is not acceptable to the said publication, its commercial rate may be negotiated and discounted to the extent possible using the equivalent DAVP rate as the basis to arrive at a reasonable rate.

C. The advertisement released to AD-HOC Publications

It is a thumb rule that advertisements are not generally released to ad-hoc publications such as, Souvenirs, bulletins, brochures, etc. is to be avoided. However, with a view to creating goodwill for the Railways, CPROs may occasionally release display advertisements to such publications subject to a maximum of Rs.3,000/- in each case (not necessarily the maximum amount in every such case) depending upon the quality and the number of copies to be brought out with an annual monetary ceiling of Rs.60,000/-. Beyond this limit each and every case must be put up to the General Manager for prior approval.

49.1 Association of Advertising Agencies in Releasing the Advertisement

There is no bar for utilizing the services of professional agencies in improving the design and artwork of the advertisement and ease in releasing the advertisement to the various publications. The important aspects of this work are as under:

1. A panel of INS accredited advertising agencies (not less than two and not more than six) may be formed for a period of one year (extendable to one more year).
2. Detailed terms/conditions, criteria of selection, the number of agencies to be empaneled, etc. may be formulated/decided by the respective Railways/Units.
3. The advertising agencies may be invited through an advertisement published in the newspapers.
4. In addition to the CPRO, an Officer nominated by the General Manager should be associated with the selection of the advertising

agencies and formation of the panel.

5. The panel so formed should have the approval of the General Manager.

49.2 Display of the Advertisements

The Display advertisements must be released depending upon the publicity requirements of the Railways/Units keeping the expenditure within their respective budget allocations for a particular year. The other aspects must also be seen as under:

1. Release of display advertisements on social and educational themes, such as, safety at railway level crossing, prevention of roof-top traveling, fire hazards and drugging/cheating of passengers, detection of unidentified objects, prevention of rail roko agitations, etc. should be undertaken from time to time depending upon the requirement and the availability of funds.
2. Release of advertisements on social and educational themes should be restricted to the newspapers brought out from within their respective jurisdictions. Preference may be given to Hindi and Regional language publications for such advertisements.
3. With a view to avoiding duplication and un-necessary expenditure on release of advertisements of common interest, a close co-ordination must invariably be maintained between the Zonal Railways headquartered at Mumbai & Kolkata and wherever more than one Railway/Unit are served by common publications.
4. Advertisements on inaugural functions could be released to the newspapers brought out even from outside the respective jurisdictions of the Zonal Railways depending upon the importance of the occasion, the needs of exposure and target audience**.**
5. Production and other Units may release image building advertisements to a few leading newspapers brought out from outside the place where these units are headquartered, depending upon the needs of exposure and target audience.
6. The size of the advertisement should be kept to a minimum. However, half page/full page advertisements may be released,

occasionally, on the eve of inaugural functions having national importance.

7. The size of an advertisement beyond 500 square cm should have prior approval of the Additional General Manager/General Manager.
8. In the event of releasing half page/full page display advertisements on inaugural functions of national importance, every effort should be made to restrict the number of insertions/newspapers to keep the expenditure within the reasonable limits.
9. Requests seeking advertisement support for special editorial features/supplements on Railways (stated to be brought out by the publications at their own cost) may also be considered on merits by CPROs at DAVP rates depending upon the publicity requirements and the availability of funds.
10. Since the publications have a tendency to seek advertisement support for the same feature/supplement from a number of Railways/ Production Units/ PSUs (many a time without the knowledge of each other), it may be ensured that all the advertisements appear in the same edition wherein the feature is published and that the total advertisement support (from all such sources) should not exceed 25% of the combined size of a supplement (inclusive of the space occupied by the advertisements).

49.3 Small/Medium & Regional Language Publications

The Railways must draw up a comprehensive media list of DAVP approved newspapers/periodicals for release of advertisements. The Advertisements may be released to these publications on 'rotation basis' to ensure that claims of small, medium as well as regional language (including Urdu)newspapers/ periodicals are also taken care of.

49.4 Language of Advertisements in Railways

The Language of an advertisement has to be the same as that of the newspapers/periodicals. All efforts be made those advertisements are to be published in Rajbhasha (Hindi)also. In the event of non-availability of Hindi newspapers, other language newspapers may

be used for this purpose. In the case of non-Hindi territory, advertisement must be given in leading newspapers of that language, where the activity or occasion is planned.

49.5 Tender and Auction Advertisements

The advertisement for issuance of tender or auction needs to be carefully seen and edited by public relation department officials (CPRO/Sr. PROs/PROs) and advertising agencies. In case of any doubt or ambiguity, the consultation of concerned department must be made. The size of the advertisement should also be minimized. All efforts be made for avoidance of corrigendum. The corrigendum dents the economy as well as create confusion in the eyes of trade and public. The other aspects to be seen as under:

1. The selection of publications for release of tender advertisements should be done carefully and an attempt should be made to get the maximum coverage in the newspapers of the region concerned, instead of indiscriminately releasing these advertisements to a large number of newspapers or releasing them on publication shaving very high tariff.
2. CPROs may use their discretion in this regard keeping in view both proper coverage as well as the need for economy.
3. The basis for selection of a particular publication for tender advertisements should be
   a) Need of exposure in a particular area or region
   b) Value of tender
   c) Location and proximity of probable contractors, suppliers, firms and companies dealing with different type of materials/projects/works, etc.
   d) Circulation and standing of the publication
   e) Positive response likely to be received.
4. The headline of the tenders/auction advertisements should be based on the contents of the work/supply (instead of merely indicating 'Tender Notice'. However, it should be kept short and

catchy but should not be larger than the total text material of the advertisement itself.

5. Use of 'logo' should be made only once at the beginning of the clubbed advertisements.
6. Printing in bold letters (more than 6 points) should be used very selectively. Tenders should generally be printed in 6 points font size.
7. However, selection of font size beyond 6 points is left to the discretion of the CPROs, who may decide after taking all precautions both for readability and economy.
8. Railways should discourage the tendency on the part of some newspapers and advertising agencies (through which advertisements are released), to waste valuable space.
9. The tendency to waste space, by using large print size and keeping columns or lines quite apart, must also be curbed.
10. If advertisements are not released through the advertising agencies, the text of the advertisements should be type-set and given to publications in the form of bromide or art-pull or positive, etc. to ensure uniformity.
11. Except global/national tenders, all other classified advertisements should be released in 'single-column format' only.
12. Two or more columns should be used only where tabulation work is involved, or such a display is absolutely necessary.
13. Detailed terms and conditions of tenders need not form part of advertisements, as they are already contained in the tender documents.
14. Only essential items may be mentioned in brief.

49.6 Publishing the advertisement of Employment

The advertisements containing the employment notices issued by Railway Recruitment Boards (RRBs) should be released only to the DAVP approved publications at the DAVP rates. The other aspects must also be seen as under:

1. While issuing the advertisement, overall economy in expenditure must be observed, unduly large sized Employment Notices and Application Forms should not be published in the newspapers rather the abstract employment notice be published, and link be given for detail information.
2. All employment notices must be compressed and edited to ensure that only brief and indicative advertisements are released in the newspapers for wider coverage.
3. The applicants for such employment must be advised in such advertisements to look for the detailed advertisement (including the application form) published in Employment News/Rozgar Samachar of a particular date.
4. The Railway Recruitment Boards and Railway Recruitment Cell of the zonal railway must keep close liaison with the nearest CPRO for consultations.
5. The CPRO must guide the RRB and RRC about the procedural and other formalities relating to the release of advertisements.

49.7 Special Provisions for Railway PSUs

It is desired that The Managing Directors of Railway PSUs should also make all efforts to avail the benefits of the DAVP rates (per square cm) while releasing advertisements. However, the Managing Directors are authorized to take decisions in regard to release of advertisements in the best commercial interest of their respective PSUs, which may result in a mix of advertisements – sometimes at the DAVP rates and at others, at the commercial rates. The payment of advertisement must be in accordance with the space utilized in square cm.

49.8 Settlement of Advertisement Bills

The settlement of advertising bills to the Advertising agencies and other publications should be done as a priority as railway has to deal with such agencies in future also. Thus, it is desired that once the advertisement is circulated, the bill must be sought from such

agencies and be paid maximum 60 days of publication. The bill must contain the measurement and also paper or its cutting where it was published. The other aspect of the payment is to be seen as payment to be made for the space utilized in square cm on the basis of the rates of the publications per square cm.

The colored advertisements, an extra payment (over and above the rate of black& white advertisements) is to be made at the rates decided by the DAVP from time to time. No Rebate/discount is claimed on the advertisement bills preferred by the advertising agencies in respect of railway advertisements released at DAVP rates, provided the bills are otherwise in order.

INTERACTING WITH PRINT AND DIGITAL MEDIA

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Interaction with Print and Digital media requires complete authority and knowledge of the organization. In railways, this responsibility is assigned to specific people who either deal with the subject or are competent to talk about that subject. One thing is very clear that the handling of print and digital media is a difficult task and sometimes it cuts both ways. As per policy, the following authorities are empowered to deal with media.

1. **At the Railway Board level**
   - **a)** Hon'ble Minister of Railways, Hon'ble Minister of State for Railways.
   - **b)** Chairman, Members and Secretary, Railway Board.
   - **c)** Additional Director General (PR).
   - d) Director Information &Publicity (DIP/EDIP) or any other Officer(s) especially authorized by the Minister of Railways may give information or be accessible to the representatives of the media.

e) Any other officer, if approached by the representatives of the media is to refer them to the ADG(PR) (**the official Spokesperson for the Ministry of Railways**) or in his absence to the Information Officer.

In all the cases, The Chairman and CEO of Railway Board must be kept informed about the press conferences even that conference is being held by Member of the Board or any subordinate authority.

2. **At the Railway/PU Headquarters level**
   a) The General Managers.
   b) The CPROs are authorized to meet the media in a formal Press Conference or informally depending upon the importance of the nature of the information to be given.
   c) However, the General Managers may authorize the PHODs to give information or be accessible to the representatives of the media.
   d) Any other officer, if approached by the media, is to refer them to the CPRO.

3. **At the Divisional level**
   The Divisional Railway Managers (DRMs) are permitted to meet the representatives of the media approaching them for factual information on specific subjects. The other aspects below may be covered at divisional level.
   a) They may also send news items concerning the working of the Railways (particularly in their division and other matters of local interest) to the media directly or through the local office of the Press Information Bureau (if available).
   b) DRMs may also hold press conferences **occasionally**.
   c) However, in respect of queries on wider policy matters concerning the Zonal Railway or the Indian Railways, the

representatives of the media may politely be directed to GM/CPRO or DPR/Railway Board.

At divisional level ADG(PR), it is to ensure that no unauthorized information/ material is supplied to the press, the DRMs should **generally not** delegate this work to a Divisional Officer except to ADRMs. All such information/ material should have **DRMs approval** before it is supplied to the press. Services of PROs (wherever positioned) may be utilized for this purpose.

It is important to make it clear that **no unauthorized person should speak to or interact with the media** as it may amount to the unbecoming of a railway servant. In this connection, the provisions relating to official documents and responsibility of railway servants. (contained in **Rule-11** of Railway Servants (Conduct) Rules, 1966) may also be kept in view.

The Railway Servant Conduct Rule (1966) under Rule-11 prohibited the railway servant from non-talking with media unless he is authorized. Rule-11 reads as under:

> **Communication of Official Information: -** Every Railway servant shall, in performance of his duties in good faith, communicate information to a person in accordance with the Right to Information Act, 2005 [22 of 2005] and the rules made thereunder:
>
> Provided that no Railway servant shall, except in accordance with any general or special order of the Government or in performance in good faith of the duties assigned to him, communicate, directly or indirectly, any official document or any part thereof or classified information to any Railway servant or any other person to whom he is not authorized to communicate such document or classified information."
> [Authority: Rly Board's letter No. E[D&A]2005/GS 1-5 dated 21.2.2006]

50.1 Disseminating Information to Media, Media-Feedback & Rejoinders

1. Notices of all important meetings, conferences, visits of delegations and VIPs shall, as a matter of routine, be sent to the ED(IP)/ADG(PR)/CPROs for organizing appropriate media publicity. Even if the executive department feels that the subject matter does not warrant publicity, the decision to publicize it in the media or otherwise shall be taken in active consultation with the CPRO.
2. All PHODs/DRMs must feed the PR Department regularly with information/material about activities, projects and achievements for making suitable 'handouts' and 'features' or for arranging audio-visual coverage as and when such information is available with them.
3. ED(IP)/ADG(PR)/CPROs will be responsible for developing an appropriate data bank on various subjects for their use from time to time on the basis of information received and getting it updated by executive departments from time to time.
4. An annual action plan of PR events may be made at the beginning of each financial year on the basis of major works being undertaken on the Railways and the performance targets laid down for various executive departments. In addition, the PR Department should project specific items of achievement which would be undertaken during the year and keep the concerned departments advised in advance of the inflow of data at an appropriate time.
5. As a routine, the PR Department should ensure that concerned departments are fed with extracts of press reports deserving the attention of the concerned PHODs/DRMs. Rejoinders, if necessary, on any new report, must be issued within a week of its publication. If need be, some of the information required for such rejoinders can be collected even on telephone from

the concerned executive Departments to avoid delays. PR Department as well as the concerned executive Departments shall be jointly responsible for timely rebuttals of undue press criticism.

50.2 Publicity during Accidents/ Other Unusual Occurrences

1. In the event of accidents, resulting in damage/casualties, the image of Railways invariably suffers because of adverse reactions in public and media. In such situations, Railways must display greater responsibility not only in relief and rescue operations but also in interacting with the media with correct and updated information.
2. Sometimes, newspapers publish contrary versions relating to any accidents attributing them to railway sources. It is, therefore, necessary that only the authorized officers (mentioned in para 1.1 to 1.3) interact with the media. Unauthorized person should not speak to the media (as mentioned in para-1.4).
3. It has to be ensured that the media is kept informed of relief and rescue measures, passengers injured and dead, restorations of traffic, etc. to avoid the breeding of gossip, rumors and sensational reporting in the absence of authentic information. CPROs must depute an official to monitor and scan through all the print and major electronic media reports, analyses them and take appropriate action immediately to correct any adverse trend for any report aimed at mere sensationalizing the untoward incident.
4. The media persons must be briefed at the accident site and if necessary, at least once every day at the Divisional/ Zonal Headquarters on a regular basis. For this purpose, the executive departments should ensure that the PR Department is fed with the latest information and updated as a top priority.

5. Appropriate rejoinders and contradictions must be issued, and copies thereof should be sent to DPR, Railway Board for briefing the media at the national level. During such emergencies, a close contact should be established with the DPR Ministry of Railways. It is of prime importance that PR activities have a common strategy and one voice.
6. Sometimes train services are disrupted badly because of other reasons such as bandh calls, rail roko agitations, etc. by political/ pressure groups etc. for causes many a time not even remotely connected with railway operations.
7. In situations mentioned in para-3.6, where advance information of such agitation is available, zonal railways must publicize the possibility of train services getting affected from the relevant date through suitable press notifications. These notifications must make it amply clear that the agitations and bandh calls are responsible for the cancellations/ diversions of the train services, if any. Wherever necessary advertisements can also be brought out in the newspapers, TV and Radio in this regard. Apart from conveying information, such initiatives may also generate opinion against such bandh calls/ agitations.
8. A similar action (as mentioned in para-3.7) may be taken for publicizing disruption of traffic due to floods, fog, etc. regretting inconvenience caused to the passengers and stating clearly that the reasons for such disruptions are beyond the control of Railway Administrations.

50.3 Hospitality, Press Conferences/ Receptions/ Tours

1. The information boom and expansion of media networks leading to extensive reporting of various facets of railway working is at times characterized by a lack of understanding of the complexities involved therein, and therefore, reportage of one-sided stories. With a view to placing such misapprehensions in the correct perspective, so as to

encourage and facilitate objective reporting, there is a need for maintaining cordial relations with media and creating awareness amongst them, through press conferences/ receptions, conducted press tours and also through exploring informal relations by extending hospitality for entertaining them.

2. It may be noted that all expenditure on hospitality and press conferences/ receptions/ tours should be with the purpose of education and creation of awareness amongst the opinion makers within the media. Therefore, the process of education and awareness needs to be undertaken in a scientifically designed and structured manner.

Hospitality

3. Hospitality is aimed at offering courtesies, which might entail expenditure. Accordingly, ED(IP), ADG(PR) & CPROs have been authorized to maintain a hospitality fund for the purpose. This fund is meant for entertaining press correspondents, media personnel, agencies and persons involved in TV/Radio publicity as also advertising agencies in or out of office in an informal manner in small number not exceeding 20.
4. The nature and place of entertainment, the likely expenditure on each occasion and the actual number of invitees (who may include officials not exceeding 50%)will be as per the discretion of the CPROs under the general guidance of the General Managers. CPROs can also arrange personal level entertainment at their residences provided that it has prior approval of the General Managers.
5. The guests entertained should be restricted to the minimum number necessary on such occasions and entertainment done as economically as possible within the prescribed limits. Any restrictions imposed by the respective State Governments on the number of guests to be served etc. should be observed.

Adequate documentation as to the purpose of the expenditure, number of media persons entertained, amount of expenditure, etc. should be maintained.

6. The ceiling on expenditure is Rs.250/- per meal per head or Rs.500/- per head per day subject to the conditions mentioned in para-4.7- 4.9.
7. The rates mentioned in para-4.6 are inclusive of alcoholic drinks which may be preserved with prior approval of the General Managers.
8. In respect of the ED(IP)/ADG(PR) and the CPROs of Zonal Railways, the annual ceiling of expenditure on hospitality is rupees one lakh. They are authorized to maintain a cash imprest of Rs.8000/- for this purpose.
9. In respect of the Production & other Units, the annual ceiling of expenditure on hospitality is Rs.50000/-. The CPROs of these units are authorized to maintain a cash imprest of Rs.4000/- for this purpose. Wherever no officer is designated as CPRO and PR Unit is headed by a Sr.PRO or a PRO, these provisions will equally apply to them.
10. The expenditure incurred from the imprest may be recouped by submitting vouchers, cash memo or bills etc. (or appending a certificate for smaller amounts less than Rs.20) to the Accounts Office.
11. If it is not possible or expedient to support a payment by a voucher, the expenditure incurred will be reimbursed on furnishing a Certificate as follows: “Certified that the number of guests charged for is, to the best of my knowledge, correct. Certified further that the rates accepted had been previously agreed upon and are found fair and reasonable after verification and that no more than the usual charges have been claimed. It is also certified that the catering arrangements were made with due regard to the status of the guests, the

availability of accommodation and/or other facilities and consideration of economy."

Press Conferences / Receptions / Tours

12. Organizing Press Conferences/ Tours and Receptions, etc. are accepted means of interacting with media persons. They can be invited over to morning tea/ breakfast/lunch/ evening tea/ dinner by the CPROs.
13. The ceiling for the number of invitees on a particular occasion (including officials) at lunch/ dinner is 50 (fifty) and for morning tea/ breakfast/ evening tea is 60 (sixty). The ratio of officials to non-official guests should not exceed 50% of the total number of invitees. The limit on the maximum number of invitees can be relaxed with the prior approval of the General Managers.
14. Care should be taken to ensure that the expenditure is kept to a minimum without affecting the quality of the entertainment. The expenditure per head should also be kept to the minimum possible within the prescribed ceilings.
15. The ceiling expenditure on meals per head per day is Rs.500/- within the overall PR Budget. The expenditure on this account can be incurred by the CPROs with the administrative approval of the AGMs/GMs without finance concurrence. In exceptional circumstances, expenditure, not exceeding Rs.750/-per head per day, may be incurred for meals with prior finance concurrence. If the expenditure on any occasion does not exceed Rs.25000/-, it can be incurred by the CPROs with the administrative approval of the AGMs/GMs without finance concurrence. The expenditure beyond Rs.25000/- on any occasion, in addition, requires prior finance concurrence.
16. Ordinarily alcoholic drinks may not be served. However, where the General Manager considers it necessary, such drinks may be served with his prior permission in writing. The

ceiling for serving alcoholic drinks is Rs.50/- per head and the expenditure incurred on this account will be outside the ceilings per head mentioned in para-4.15.

17. When the arrangements for entertainment are made at places other than hotels, where the bill for items of food presented are exclusive of tipping charges, an amount, not exceeding in any case 5% of the total entertainment charges, may be paid as a tip.
18. For entertaining the media (if the party exceeds 10 (ten) in number) and for organizing conducted press tours, prior approval of the General Managers is necessary.
19. The expenditure on lodging, transportation, etc. may be incurred by CPROs with the administrative approval of the AGMs/GMs. The expenditure so incurred would be subjected to rendering appropriate accounts in the usual manner.
20. Wherever no officer is designated as CPRO and PR Unit is headed by a Sr. PRO or PRO, these provisions will equally apply to them.

USE OF PHOTOGRAPHS OF DIGNITARIES

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The use of photograph of dignitaries like Hon'ble President of India, Hon'ble Prime Minister of India, Hon'ble Minister of Railways requires prior permission. The important rules in the subjects are as under:

1. A rigid / fixed criterion for carrying the photographs of the dignitaries in the Railway advertisements cannot be laid down to take care of all the situations.
2. It has, however, been a well-established practice to invariably carry the photograph of Hon'ble Minister of Railways in the display advertisements highlighting achievements of the Indian Railways or those relating to the foundation-stone laying ceremonies, inaugural functions, etc. This practice was continued till 2014, now display of Hon'ble Prime Minister's Photo is only photo to be displayed.
3. Subject to the importance of the occasion, designing constraints, space and other relevant factors, generally the photographs of the Hon'ble Ministers of State for Railways.

and other dignitaries may also be carried in such advertisements (mentioned in para-3.2).

4. As per the advice of the Cabinet Secretariat, the photograph of Hon'ble Prime Minister need not be inserted in the advertisements released by the Ministries/ Departments and Public Sector Undertakings except in the case of events of national importance or on national occasions.
5. Whenever, it is considered appropriate to put the photograph of Hon'ble Prime Minister in any advertisement, it is necessary to obtain prior approval from the Secretary to the Prime Minister, giving details of the proposed release including text and photographs of the dignitaries.
6. Requests seeking permission to publish the photograph of Hon'ble Prime Minister should reach the Prime Minister's Office at least a week before the date of publication of the advertisement. In any case, the 'last minute approach' has to be avoided.

INVITATION TO PUBLIC FUNCTIONS ORGANIZED BY RAILWAYS

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In railways, there are specific rules under which invitation to dignitaries and public representatives are made. The gist of policy is as under:

1. Invitation should invariably be sent to all the elected representatives of the area (at their local and permanent addresses) to attend the public functions organized by the Railways/ Units at the locations falling in the area/constituency represented by them.
2. Since the Members of Rajya Sabha represent the State and not a constituency, invitations should be sent to them in the same manner if the location of the public function falls in the 'Nodal Districts' opted by them under the Member of Parliament Local Area Development Scheme (MPLADS).
3. In order to bring parity between the status of the Members of both the Houses of Parliament and also in the interest of uniformity of practice, names of Members of both the houses (Lok Sabha and Rajya Sabha), should be reflected in the invitation cards, advertisements, plaques, etc.
4. The names and the nodal districts of the Members of Rajya Sabha is made available by the Rajya Sabha Secretariat and circulated to

the Railways/Units by the PR Directorate of the Ministry of Railways from time to time. However, in the absence of complete authenticated list, websites of Rajya Sabhawww.rajyasabha.nic.in and the Ministry of Statistics and Programme Implementation www.mplads.nic.in may be referred to.

5. For all important functions which are to be attended by Hon'ble Prime Minister, or Minister of Railways, Minister(s) of State for Railways, invitations should also be extended to the Governor and the Chief Minister of the concerned State/Union Territory.
6. While organizing public functions, eminent persons from public life of the area should also be given due recognition by inviting and requesting them to be the Chief Guests or to perform the inauguration of function.
7. All courtesies, such as seating arrangements in respect of the invitees to a public function should be extended and protocol scrupulously followed so that there is no room for complaint.
8. Precedence accorded to dignitaries and officials at State/ Ceremonial/ Public function is regulated by a Table of Precedence (commonly known as Warrant of Precedence) notified by the President's Secretariat. However, the principle mentioned above may be kept in mind while drawing up the list of invitees and determining the status to be conferred on the guests/ invitees including seating on the dais at State/Ceremonial/Public functions organized by the Railways.
9. The principle is that eminent public persons, scientists, artists and other non-officials, though not included in the Table of Precedence, may be given appropriate high positions on the basis of their high status in public life. This principle can be better understood in the words of Shri Jawaharlal Nehru, the first Prime Minister of India, who inter-alia noted in this connection as under:

> "There are large numbers of people outside the Warrant of Precedence, who in effect are more important than those people who are in the Warrant of Precedence and who, on occasions, may rank higher than those who are included in the Warrant of

Precedence. Thus, many non-officials are not included in the Warrant, but on any particular function they may be given seats much higher than those who are included in the list."

10. It is possible that eminent persons may figure in a particular article in the Warrant of Precedence by virtue of their holding some official position. However, the principle stated above will hold well in regard to such dignitaries also.
11. Small level functions such as inauguration of PRS, extension/renovation of passenger amenities at stations, Bhoomi Pujan, etc., where high level dignitaries are not participating may be conducted through local Members of Parliament.

52.1 Use of Table of Precedence to invite dignitaries and officials in the public functions

Sub: Use of Table of precedence to invite dignitaries and officials in the public functions-clarifications.

Kindly refer to Board's letter of even number dated 25.01.2017 regarding the above-mentioned subject.

2. In the wake of receipt of complaints raised by various MPs/MLAs, it is imperative upon the Board to reiterate that all zonal railways must adhere to the Table of Precedence (http:// mha.nic.in/ sites/upload_files/ mba/files/ table of precedence.pdf) as notified in the President Secretariat's letter dated 26 July 1979. Preference should be given to the aforementioned Table of Precedence (issued by MHA) over the Warrant of Precedence issued by any State Government.
3. Whenever Railways organize a public function, the local MPs/MLAs and the Chief Minister or the Minister of the State Government hailing from the area where function is to be held should invariably be included among the invitees.
4. Invitations to local Rajya Sabha MPs to attend functions taking place in their nodal districts covered under the Member of Parliament Local Area Development Scheme (MPLADS) are also to be sent at the MPs' local and permanent addresses.
5. The invitation cards and media events, if organized for the function held in the constituency, may include the names of the Members of that

constituency who have confirmed participation in these functions. If a constituency of any Member of Parliament is spread over more than one District, the MP should invariably be invited to all the functions held in any of the Districts which are part of his/her constituency.

6. Proper and comfortable seating arrangements at public functions and proper order of seating on the dais should be made for Member of Parliament keeping in view the fact that they appear above officers of the rank of Secretaries to Government of India in the Warrant of Precedence.
7. For all such functions which are to be attended by Hon'ble Prime Minister, or Minister of Railways, Minister of State for Railways invitations should also be extended to the Governor and Chief Minister of the concerned State/Union Territory.
8. There are a large number of people outside the Warrant of Precedence who in effect are more important than those people who are in the warrant of Precedence and who, on occasions, may rank higher than those who are included in the Warrant. Thus, many eminent public persons, scientists, artists and other non-officials are not included in the Warrant but on any particular function they may be given seats much higher than those included in the list.
9. It is possible that such eminent persons may figure in a particular article in the Table of Precedence by virtue of their holding some official position. The above principle (Para no. 8) will also hold good in regard to such dignitaries, and they could accordingly be given higher position in State/Ceremonial/public functions on the strength of their eminence or status in public life notwithstanding their position in the Table.
10. All of the above-mentioned instructions are already incorporated in Para 4 of Chapter- V of Manual for Public Relations Department. Hence, you are requested to adhere to these instructions.

Reference: Letter No.2017/PR/17/1 dated 01.12.2017 is issued and signed by Ved Prakash, Director, Information & Publicity Railway Board and given to Chief Public Relations Officers and All Zonal Railways/ Production Units

OFFICIAL DEALINGS WITH MPs/MLAs/MLCs AND OTHER PUBLIC REPRESENTATIVES AND DIGNITORIES

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There are specific rules to deal and interact with Hon'ble MP, Hon'ble MLAs/MLCs. Important points are as under:

1. There are certain basic principles and conventions, which should be followed in letter and spirit by the Railway servants while interacting with the Members of Parliament and State Legislatures.
2. Violation of these principles/ conventions may be viewed seriously.
3. The Railway servants should show courtesy and consideration to the Members of Parliament and State Legislatures.
4. While the Railway servants should consider carefully or listen patiently to what the Members of Parliament and of the State Legislatures may have to say, they should always act according to their own best judgment.
5. Any deviation from an appointment made with a member must be promptly explained to him to avoid any possible

inconvenience. Fresh appointment should be fixed in consultation with him.

6. An officer should be meticulously correct and courteous and rise to receive and see off a member visiting him.
7. Members of Parliament/ State Legislatures of the area are to be invariably invited to public function organized by the Railways.
8. Proper and comfortable seating arrangements at public functions are to be made for Members who appear above officers of the rank of Secretaries to the Government of India in Warrant of Precedence.
9. Letters from members of Parliament and Members of State Legislatures must be promptly acknowledged, and a reply sent at an appropriate level expeditiously. Relevant provisions of the Manual of Office Procedure should be observed in this regard.
10. Information or statistics relating to matters of local importance must be furnished to the Members of Parliament and State Legislatures as and when asked for. If such a request is to be refused, instructions from higher authority should be taken.
11. A Railway servant should not approach Member of Parliament and State Legislatures for sponsoring his individual case.
12. References from Committees of Parliament must be attended to promptly. A senior officer at the level of Joint Secretary or equivalent should be charged with the responsibility for ensuring this.
13. The officers should not ignore telephonic messages left for them by the Members of Parliament/State Legislatures in their absence and should try to contact at the earliest the concerned Member of Parliament/ State Legislature.

PART V:
MEDICAL

INTRODUCTION OF MEDICAL DEPARTMENT IN RAILWAYS

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True to the ideals of welfare state, the Indian Railways have been pursuing a policy of progressively improving both working and living conditions of staff and providing them with maximum possible amenities in several spheres including medical facilities.
Though the Government played the leading part in the development of Railways, there were, till 1947, as many as forty-two Railway systems in the country each following a separate policy of its own specially in the matter of medico-social amenities with the result that the medical and health organization had no uniform pattern of development and the level of amenities provided differed widely. The Railway medical services, catered only to routine administrative necessities, viz, medical examination (pre-recruitment and in service) of staff, issue of fit and unfit certificates, check on malingering, etc, while attention to the curative and promotional health care of the railway staff was meagre or absent. Even in this commitment certain facilities available to Group A, B & C employees and their family members were not extended to

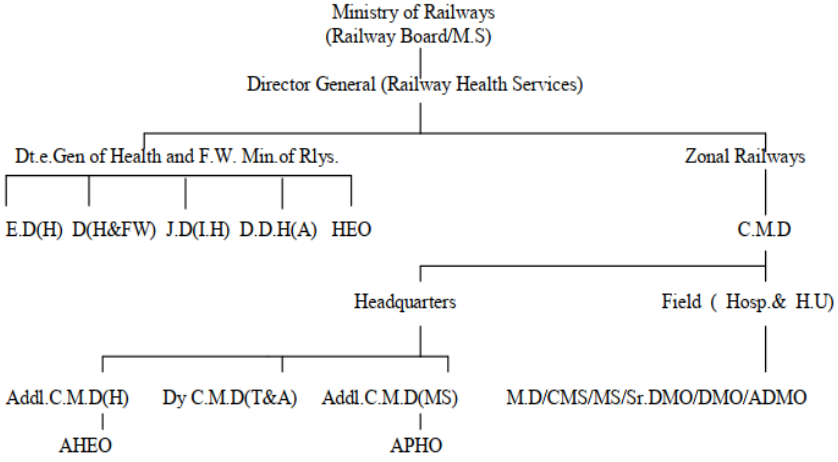
Group D employees Agam some Railways provided for treatment of employees only. while others provided for the treatment of family members as well.

With a view to examine and implement the New Medial Scheme, a separate cell was created at the Railway Board in August 1955, headed by an Officer on Special Duty (Medical) which post was later on converted to Joint Director (Medical) and then upgraded to Director. Health. There has been a progressive improvement and expansion of the curative and promotional health services on the Indian Railways since then, resulting in an appreciation from the Kunzru committee (1963) as being second to none in the country

All Zonal Railways have now more or less a uniform level and pattern of medical facilities. The policy in this respect is based on the realisation that the expenditure in this direction would pay dividend in the long run. The output of a contented and healthy worker who is relieved of mental and financial worries on account of his own or some family member's sickness, will be better and more conducive to the efficient running of Railways. This is particularly relevant in the case of running staff who have to be away from their homes most of the time.

Organisation of Medical Department in IR

The administrative set up of the Health Department is given in the following chart-



The Indian Railways are subdivided into 68 divisions The medical facilities are channelled through different units, at different levels, a health unit, being the lowest, under the charge of ADMO/DMO/SDMO and a Central Hospital, the highest, under the charge of Medical Director. There is a large force of para-medical staff (approx. 52,500) manning these units

Mission Statement of Medical Department in IR

Mission Statement:

Total Patient Satisfaction Through Humane Approach & Shared Commitment of Every Single Doctor and Paramedic to Provide Quality Health Care Using Modern & Cost-Effective Techniques & Technologies.

To meet the above mission the Health Department on the Indian Railways is committed to: -

(a) provide quality health* care service.
(b) constant up gradation of curative services in tune with the latest technologies and within the resources available to Railways.
(c) provide regular CME (Continuing Medical Education) inputs to medical and paramedical staff.
(d) combine efficiency with courtesy and empathy.
(e) establish effective base for disease prevention and health promotion services including industrial health.
(f) meet the administrative needs of the Indian Railways.
(g) work for the acceptance of a small family norm by the staff.
(h) ensure adequate physical standard of the employees at recruitment and during their periodical check-up.
(i) provide and maintain accident relief medical equipment, including first aid boxes, to give prompt relief to passengers injured in railway accidents.
(j) attend the passengers injured or taken seriously ill in trains or at Railway stations, on payment, under certain circumstances.

(k) provide medical facilities at par with serving employees to those retired Railway employees who have opted to become members of the RELHS 197, and
(l) administer medical treatment to outsiders, on payment, under certain circumstances.

Indian Railways Health Services have adopted the modern system of medicine However the Personnel department arrange the provision of some basic facilities under the Indian system of medicine also, by engaging part time Homeopathic and Ayurvedic doctors and running clinics funded by the Staff Benefit Fund.

*"Health is a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity- WHO.

Code of Conduct for Medical Officers

The various rules, codes, etc. governing the Railway medical officers: -

(1) A medical officer has to abide by the following rules, codes, etc: -
   (A) The Railway Services (Conduct) Rules, which are meant for all Railway employees.
   (B) The rules laid down in connection with medical attendance and treatment of Railway staff, members of then families and dependent relatives, and other allied matters, as contained in the Establishment Codes and instructions and rulings issued by the Ministry of Railways, from time to time, as are incorporated in the succeeding chapters of this Manual.
   (C) The local legal obligations, e.g. the provision of State Acts, like the Coroner's Act, Drugs Act, Pharmacy Act, Poisons and Dangerous Drugs Act and such other Acts, rules and regulations made by the State or local administrative bodies from time to time, to the extent of their applicability to Railway medical officers.
   (D) The Code of Medical Ethics are applicable to all

Railway doctors. The general principles which embody the Code of Medical Ethics are published by each State Medical Council and Railway Medical Officers should obtain these from the respective Medical Council of the State in which their hospital or health unit is situated, for reference and guidance What is stated in the Code of Medical Ethics does not constitute a complete list of ethical principles. The State Medical Council may from time to time amend the existing regulations or adopt additional regulations in respect of professional conduct, consistent with the constitution and byelaws of the Medical Council of India Any breach of these regulations shall be good and sufficient reason for taking disciplinary action against the doctors by the concerned State Medical Council.

(2) Apart from the Code of Medical Ethics, a Railway Medical Officer should bear in mind the provisions of the Geneva Declaration accepted by the General Assembly of the World Medical Association at London on October 12, 1949.

Indian Railway Health Service (IRHS)

(Formerly Indian Railway Medical Service (IRMS))

The Indian Railway Health Service (IRHS) is an organized central Group A civil service of the Government of India under the Ministry of Railways, consisting of doctors recruited by the Union Public Service Commission's (UPSC) Combined Medical Services Examination. The officers of this service are responsible for providing comprehensive health care to serving railway employees, retired railway employees and their dependents, as well as other categories of staff such as contractors, vendors and licensed porters.

Previously known as the Indian Railway Medical Service (IRMS), the organisation was renamed as the Indian Railway Health Service (IRHS) on 15 January 2020, because of a new introduction of

the Indian Railways Management Service (IRMS).

PROFILE OF INDIAN RAILWAY HEALTH SERVICE (IRHS) (ERSTWHILE INDIAN RAILWAY MEDICAL SERVICE)

1	**Name of the Service/Cadre and year of its formation**	
	Indian Railway Health Service http://www.egazette.nic.in/WriteReadData/2020/215584.pdf (Erstwhile Indian Railway Medical Service was formed in the year 1976)	
2	**Cadre Controlling Authority (Department and Ministry)**	
	Director General/Railway Health Services, Ministry of Railways (Railway Board)	
3	Hierarchical structure of the cadre/service	DG/RHS PCMD/PED (Health)-HAG CMD/CMS/ED (Health) – SAG Regular ACMD/ACMS/ACHD/ACMO – SAG DACP Sr. DMO/Director – NFSG Sr. DMO – JAG DMO – Sr. Time Scale ADMO – Junior Time Scale
4	Places of posting with grades (cadre posts/ex-cadre opportunities, if any)	In Zonal Railway/ Production Unit Headquarters, Central Hospital of each Zonal Railway/ Divisional Hospitals/Sub-divisional Hospitals and Health Units.
Objective of the Service		
5	Role of the Service	To provide medical facilities to railway employees/ officers, their wards and dependants and other railway beneficiaries.
6	Brief of Duty charter of the Officers (Responsibility of various grades)	
	(A) Duties of Assistant Divisional Medical Officers: (i) To attend the indoor wards, and outpatient department daily and as required. (ii) To carry out physical examination of candidates and of employees in service. (iii) To look after family welfare, public health and sanitation in his jurisdiction. (iv) To carry out examination of vendors. (v) Responsible for discipline and proper discharge of duties of the Hospital/Health Unit Staff. (vi) To carry out duties assigned to him specially if any and will prepare returns and indents connected with his speciality. (vii) He will maintain and ensure upkeep of equipments in his charge. **(B) Duties of Specialist Doctors:** Independently manage the concerned clinical Super-specialty in all aspects including diagnosis, treatment and follow up, conduct academic and developmental activities. Perform Administrative	

	activities related to the specialty.	
Recruitment:		
7	Method of initial Recruitment in the Service/cadre (Exam and how the same is conducted) (Link of last notification for recruitment)	
	ADMO - Junior Scale- 100% direct recruitment through CMSE conducted by UPSC. **DMO - Sr. Scale-** 30% by direct recruitment through UPSC failing which by promotion 70% by promotion from ADMOs. **Sr. DMO – JAG-** 5% by direct recruitment through UPSC failing which by promotion. Direct recruitment shall be based on the needs of specialists in various disciplines. 95% by promotion from DMOs. **ADDS – Jr. Scale-** Direct recruitment through UPSC.	
8	**Eligibility criteria for Service/cadre:**	
	(i) Educational Qualification for Recruitment in the Service/ cadre	**For ADMO-** recognized MBBS degree and completion of compulsory Rotating Internship. **For DMO –** recognized MBBS degree, Post Graduate Degree/ Diploma in the concerned specialty, one year experience in the concerned specialty after obtaining PG Degree or two years' experience after obtaining PG Diploma. **For Sr. DMO** - recognized MBBS degree, Double Post Graduation i.e. MD/MS along with MCH or DM in the concerned specialty. Two years working experience after obtaining MD/MS. **ADDS – Jr. Scale** Recognized BDS degree and three years' experience of dental work in a hospital/private practice.
	(ii) Experience required for initial recruitment in the service/ cadre	**For DMO –** One year experience in the concerned specialty after obtaining PG Degree or two years' experience after obtaining PG Diploma. **For Sr. DMO** - Two years working experience after obtaining MD/MS.
	(iii) Career prospects and criteria for promotion	**DG/RHS** – Apex Level **HAG** **SAG –** On the basis of seniority from amongst existing SAG officers. **SAG (DACP)** – 7 years regular service in level 13 **NFSG** – 4 years' service in level 12 **JAG** – 5 years' service in level 11 **Sr. Scale** – 4 years' service in level 10.
9	**Cadre Structure** Cadre Structure and method of filling up of posts	

	DG/RHS – Apex Level – Governed by Resolutions **HAG -** Governed by Resolutions **SAG –** On the basis of seniority from amongst existing SAG officers. **SAG (DACP)** – 7 years regular service in level 13 **NFSG** – 4 years' service in level 12 **JAG** – 5 years' service in level 11 **Sr. Scale** – 4 years' service in level 10.
10	**Career Progression and Incumbency in cadre (in tabular format)** - Approved cadre structure: Grade wise (designation, pay scale and number of posts)

Post	Grade	Pay Level	No. of posts
DG/RHS	Apex level	17	01
PCMD/PED (Health)	HAG	15	12
CMD/CMS/ED (Health)	SAG Regular	14	154
ACMD/ACHD/ ACMS/ACMO	SAG DACP	14	821
Sr. DMO/Director	NFSG	13	
Sr. DMO	JAG	12	
DMO	Sr. Scale	11	1560
ADMO	Jr. Scale	10	

	Training and Skill Development
11	**Mandatory Training** - At the time of entry in Service/cadre
	ADMO – Jr. Scale 14 weeks Foundation Training at NAIR/Vadodara including field training. **DMO – Sr. Scale** 2-4 weeks Orientation Training at NAIR/Vadodara.

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Sub: Healthcare Services- Instructions reg.

With the objectives of enhancing patient satisfaction and accessibility of IR Health Services, the following has been decided:

I. OPD (Out-Patient Department)

i. **Registration:** OPD Registration would start from 30 minutes before OPD timing. QR Code based instant OPD Registration is available. All OPD Clinics to have QR Code displayed outside. Those requiring assistance in registration to utilize OPD registration counter which will function during OPD Hours. Facility of online OPD registration through HMIS app is also available.

ii. **General OPD in all Railway Hospitals:** 0830 hours to 1500 hours on Monday to Friday and 0830 hours to 1300 hours on Saturday. Casualty

/ Emergency Ward of every Railway Hospitals will provide required service to any beneficiary requiring medical assistance 24 x 7.

iii. **100% attention:** No patient physically present in OPD for the day, shall be left unattended.

iv. **HMIS based Tele-consultation** Tele-consultations reduce avoidable footfalls at Railway Hospitals / Health Units for routine follow-up, showing reports and other consultations. Tele-consultation services are mandatory.
   a. Teleconsultation Hours: 1500 hours to 1600 hours Monday to Friday and 1300 hours to 1400 hours on Saturday.
   b. All Medical Officers have been provided with a Laptop and CUG connection. Hardware for HMIS has also been provided at all OPD Clinics.
   c. Guidelines governing tele-consultations as issued by Health Directorate, Railway Board to be adhered to.

v. **Scalability:** Hospital in-charges shall allocate time slots for all railway doctors irrespective of grade to attend OPD, provide tele-consultation or meet rush hour scalability.

vi. **Specialist OPD:** Timing of each **specialist clinic** and tele consultation days for each specialist to be well-displayed in RH and through link in HMIS App.

vii. **Modification / adjustment of OPD timings:** OPD timings may be adjusted as per local needs and Evening / Specialist OPD may be started wherever required, with the approval of the DRM/AGM on the recommendation of CMS/MD.

II. Medicines (Pharmacy / Formulary)

i. **Pharmacy Timings -** OPD Pharmacy Counter timings for dispensing medicines will be: 0830 hours to 1600 hours on Monday to Friday and 0830 hours to 1400 hours on Saturday or till the medicine has been dispensed to the last person who has been prescribed medicines.

ii. **Availability of Local Purchase (LP) Medicines:** LP Medicines shall be provided to patients preferably within 8 hours to 24 hours of the prescription having been generated, unless otherwise prescribed by the Railway Doctor. In urgent cases the emergency ward would receive the local purchase medicine supply and dispense to the patients.

iii. **Prescription Medicine for 3 months duration** shall be dispensed to the patient with chronic diseases requiring regular treatment.

Prescription Medicines for 6 months duration may be dispensed on specific request through consultation including tele-consultation.

iv. **Authorised Local Chemist (ALC):** Every RH/HU shall have a **list of ALCs for local purchase** medicines. Cash imprest purchases shall be as per instructions and procedure framed by Zonal Railways. Guidelines on LP of medicines vide Railway Board (Health Directorate) letter No. 2017/H/4/1/Local Purchase (E-3236402) dated 31.07.2023 shall be adhered to.

III. Vide Para 3 (viii) re-engagement of retired Pharmacists and / or hiring through GeM has been permitted vide RBE 59/2024 of 28.06.2024, Zonal Railway shall ensure that same is effectively utilized

IV. 24X7 **Medical Emergency Assistance** at every Railway Hospital shall be displayed in HMIS App.

V. Data Entry Operators for HMIS may be hired on need basis, as per extant Delegation of Powers (ref. MSOP 2018 Part A item 37.E) by CMS/MDs and PCMD/CH (where applicable) with concurrence of associate finance and the approval of DRM/PCMD.

This issue with the approval of the Railway Board (DG/RHS, DG/HR and CRB & CEO).

Reference: Letter No. 2024/I & Trans. Cell/ Healthcare Services/ P dated 27.08.2024 is issued and signed by Dr. Arunangshu Sarkar, ED/H (G) and Pranav Kumar Mallick, ED/Transformation and given to The General Manager, PCMDs, PCPOs, All PHODs, All Indian Railways, DG/CTIs, DG/RDSO

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Sub: Local Purchase of Medicines, Surgical Items and consumables etc

Local Purchase of Medicines, surgical items and consumables etc, is an important requirement in providing adequate and timely health care services by Railway hospitals. Various Railways have been following different systems for Local Purchase bringing in non-uniformity in systems across Railways. In this background, to streamline the system, need was felt to adopt a uniform system across Railways. Vide Board's letter at reference above, guidelines were issued on the matter. The matter has further been examined in consultation with Health and Finance directorate of Board and in supersession of Railway Board letter under reference, the following guidelines are issued:

2.0 The guidelines cover following aspects:-

Local Purchase of medicines, surgical items and consumables etc by entering into Rate Contracts with vendors i.e. firms/distributors/chemist shops on the basis of discounts offered by vendors.

Process of receipt, accountal, payment and other related issues for such purchases.

3.0 Process for entering into Rate contract for local purchase.

a. Separate rate contract shall be entered for each group i.e. Medicines, Surgical items and Consumables.
b. Rate contract shall be for a period of two years. Under exceptional circumstances, to maintain the continuity of supply, period of rate contract can be extended for a period maximum upto03 months at a time with the approval of hospital in charge ie.MD (for Central hospitals and attached Health Units) / CMS (for Divisional Hospitals and attached Health Units/ CMO (PUs) and concurrence of Associate Finance. Total extension shall not be more than 6 months.
c. Mode of tendering shall be single stage single packet system with OPEN tender.
d. Eligibility criteria and other terms and conditions including required documents etc should be clearly and unambiguously detailed in the tender so that prospective tenderers can clearly understand the scope of supply and terms and conditions and acceptability of the offer can be considered by competent authority based on the tender documents of Railway and bids submitted by the vendors.
e. While publishing the tender, the approximate value of the items purchased and broad information of items purchased in Local purchase in previous two years as well as likely to be purchased against the proposed rate contract needs to be included in the tender for the purpose of information to bidders, for fair competition and maintaining transparency in the tender.
f. To ensure continuity of supply, process for entering into rate contract should be initiated sufficiently in advance to expiry of existing rate contract. Time of start of rate contract (e.g. one month from the date of rate contract) and period of rate contract with provision of extension should be stated in the tender.
g. Tender may be called individual hospital-wise as decided by hospital in-charge i.e.MD (for Central hospitals)/CMS (for Divisional Hospitals)/CMO (for PUs)or for a group of Hospital with Health Units, / or Health Units by the MD or Divisional in-charges as per their jurisdiction.
h. Tendering shall be through e-tender on IREPS Guidelines on website/ print media advertisement for tendering process shall be followed:

i. For evaluation of the bids received there shall be tender evaluation committee consisting of:
   i. Three officers of Sr scale level (One each from Medical, Stores and Finance/Accounts department) for tenders with estimated value upto Rs 50 lakhs. The convener of Tender committee shall be from Medical department and Accepting Authority shall be minimum JA grade level (from Medical Department).
   ii. Three officers of JA grade level(One each from Medical, Stores and Finance/Accounts department) for tenders with estimated value above Rs 50 lakhs and upto Rs 10 crores. The convener of Tender committee shall be from Medical department and Accepting Authority shall be minimum SAG level (from Medical Department). In case no SAG level officer is posted/available and SAG/DACP is looking after the work of SAG, SAG/ DACP shall be accepting authority.
   iii. Three officers of SAG level (One each from Medical, Stores and Finance/Accounts department) for tenders with estimated value above Rs 10 crores. In case no SAG level medical officer is posted/available and SAG/DACP is looking after the work of SAG, SAG/ DACP may be TC member The convener of Tender committee shall be from Medical department and Accepting Authority shall be HAG level (from Medical Department)
   iv. Nomination of members by the respective department in-charges/PHOD's as the case may be.

j. Comparative charts of the financial bids for each of the categories (Medicines, surgical items and Consumables), in terms of discounts offered by vendors (vendor offering maximum discount being L-1), shall be prepared and vetted by accounts. Vetting is not required if tender is e-tender on IREPS and tabulation is system generated. In that case system as followed for e-tenders shall be followed.

k. Reasonability of the discounts offered by vendors shall be assessed while deciding the tender.

l. To avoid failure of supply in hospital, as per the need, Rate contract may be entered with more than one vendor for local purchase as per need. Decision in this regard shall be taken by hospital incharge i.e. MD (for Central hospitals) / CMS (for Divisional Hospitals)/CMO (for PUs). Such intention of the purchaser shall be disclosed inadvance in the tender.

m. Quantity to be ordered against rate contracts shall be graded in relation to discounts offered by vendors ie. L1 will get the maximum supply orders. In case of two vendors distribution of orders (value wise) should be in the ratio of 70:30 on monthly basis. Suitable methodology may be adopted. In case of three vendors distribution of orders (value wise) should be in the ratio of 60:25:15 on monthly basis. Suitable mechanism may be worked out to implement this. While deciding the tender, the distribution should be followed as far as possible. These provisions must be transparently disclosed in the tender.

n. Vendors offering maximum discount on MRP shall be considered for rate contract, individually for each category- medicines, surgical items and consumables. If rate contract is to be entered with more than one vendor, discount offered by L1 should be counter-offered to other selected suitable higher bidders i.e. L2, L3 (as applicable) for acceptance. The bidders accepting the counteroffers shall be finalized for placement of rate contract as per the predefined distribution. (The ratio will remain same to give the advantage to the one whose offer was L1)

o. The tender committee shall evaluate the bids received for eligibility, techno-commercial suitability and financial suitability of the bids and give its recommendations to the Tender Accepting Authority for its consideration through convener of the committee. Rate contracts shall be placed as per the acceptance of the Accepting Authority.

p. EMD/Security deposit, based on the annual estimated value of the Rate contract, should be taken from vendors as per the extant instructions.

4.0 Techno-commercial details:

Complete techno-commercial requirements/details from Railway side and information required from vendors should be provided in the tender. Important requirements are listed below-

a. Service levels

i. Services should be available 24x7 or 12x7 or 24x6 etc. (as per the requirement).

ii. Supply/delivery of the items shall be done as per the local requirements.

For example -

a. Items shall be supplied on the same day preferably before the

closure of OPD, if the indent has been placed at least 4 hours before closure of OPD timings.

b. In cases of life saving emergencies, vendor should be able to supply the item on a short notice preferably within one/two hour of being intimated on phone /Whatsapp/message or fax etc as decided

c. Different time limits can be set for different medicines, surgical items or consumables as per local requirements

iii. Timely supply against the supply order along with full quantity and quality/brand etc as asked shall be the essence of the contract.

b. Facilities

i. Location related to the supply points/hospital(may only be included if considered essential as per the local conditions, else delivery requirements should cover this aspect)

ii. Should follow statutory laws as laid down by central/state government authority for running the facility

iii. Requirement of proper storage, maintenance of stocks, cold chain etc (if required, specific requirement to be defined clearly in the tender)

c. Legal/statutory requirements -

i. Valid drug license for storage and supply of drugs as stipulated by the local authority of the concerned state government. Also, valid license/legal/local formalities for establishment as well as manpower.

ii. It should have the valid documents as laid down by Local, State and Central Government agencies or other government bodies from time to time.

iii. GST registration details.

iv. Any other statutory/legal requirements.

d. Financial capability:

i. Average Annual Turnover of the vendor for the last three completed financial years prior to date of opening of tender should be equal to or more than (2) three times the average annual value of retail local purchase procurement made by that Railway hospital in the last three completed financial years or three times the estimated annual value of purchase, whichever is higher.

ii. Vendor should show profits in at least two out of the three last three financial years. Balance sheet/Profit loss account certified by CA should be called for this purpose.

iii. Details of registration with any Government/Private/corporate

Hospitals and past experience of supply to Government/Private/corporate Hospitals for establishing the performance/Capacity of the vendor. Documents related to registration and contract copies along with satisfactory working in these organisations should be called.

e. Others

i. Termination of Rate Contract-Railway reserves the right to terminate the rate contract any time without assigning any reason to vendor. However competent authority (of the level of Tender Accepting Authority) shall give speaking orders with reasons to be recorded for such actions.

ii. The purchaser shall have the right to ask the vendor to show the purchase bill for the medicine/other items to ensure genuineness of the items being supplied.

iii. Railway reserves the right to send the drugs etc supplied in L.P. to be tested by Govt and other approved testing laboratories and, if required, to inform Drug Controller for suitable action.

iv. The offer of given discount on MRP will be valid for the entire period of validity of rate contract including the extended period if any.

v. Vendor shall indemnify the Railway administration for any loss or liabilities arising due to defective/sub-standard supplies by the vendor.

vi. Packaging and Delivery requirements: Standard packaging norms based upon the Medicines, Surgical Items and consumables requirements shall be followed as per extant practice. Delivery shall be made by the supplier in accordance with the Local requirements.

5.0 Operation of Rate Contract

a. Supply Order against the rate contracts should be placed on the vendor(s) as per the criteria and periodicity fixed by the hospital in charge ie.MD (for Central hospitals/Attached Health Units)/CMS (for Divisional Hospitals/Attached Health Units)/CMO (PUs) based on the requirement and fulfilling the criteria in the tender document/contract. Supply order shall be issued exercising Local purchase powers provided under Medical SOP for Medical department.

b. Procedure for placing the supply order, i.e. whether through physical handover to the representative of vendor during visit to hospital/ health unit or through FAX or email/digitally signed order or any other means should be pre-decided and mentioned in the tender.

c. Wherever HMIS is fully implemented, live data of stock of all drugs including alternatives will be visible to all doctors and pharmacists. Wherever HMIS is not available, Store pharmacist will circulate the updated list of available items in stock periodically (periodicity to be fixed by hospital in charge i.e. MD (for Central hospitals)/CMS (for Divisional Hospitals)/CMO (PUs) for the information of all doctors working in the hospital.

d. Treating doctor will issue the LP slip to LP pharmacist who will compile all such prescriptions as per stock position, duly certifying that all the items indented are out of stock in store and put up to the medical officer looking after store for necessary scrutiny. Then it will be put up to hospital in charge i.e. MD (for Central hospitals)/CMS (for Divisional Hospitals)/CMO (for PUs) for final approval. MD (for Central hospitals)/CMS (for Divisional Hospitals) /CMO (for PUs) can nominate a IRHS officer for this purpose.
   It will be done through HMIS as per laid down procedure, wherever HMIS is implemented.

e. After final approval, LP pharmacist will place the supply order on the vendor(s) as per the criteria and periodicity policy already decided.

f. Timeline for supply should be strictly followed.

g. If a vendor fails to supply as per the supply order placed as per contract conditions of rate contract, that particular item shall be procured from the next vendor due for the next supply order as per the criteria and periodicity policy already decided for placement of supply orders and the failure will be recorded in performance register against the defaulting vendor. If this arrangement fails and there is extreme urgency, hospital in charge le. MD (for Central hospitals)/ CMS(for Divisional Hospitals) /CMO(PUs) can permit purchase from the open market.

h. Poor performance of the defaulting vendor shall be recorded. Any extra expenditure incurred in arranging the required items due to default of the vendor in supply shall be recovered from the defaulting vendor.

i. Efforts should be maintained to limit the local purchase. The items frequently procured through local purchase should be converted as stock item and their regular availability should be ensured by including these regularly in AMI/Supplementary indent / Special indent, procured by Stores department.

6.0 Process of Receipt, Accountal, Payment, Issue and other related issues for items under local purchase.

a. Medicines and other items should be supplied by the same quality/ brand etc as mentioned in the supply order. No alternate or substitute will be accepted. However, in case there is no option, the indenting officer will obtain permission from hospital in charge i.e. MD (for Central hospitals) / CMS (for Divisional Hospitals)/CMO(PUs) for accepting any alternative medicine or item in consultation with the treating doctor

b. Wherever possible, Receipt register will be maintained by the store pharmacist on UDM, and all items received should be entered into UDM Software. Details of each receipt shall be entered in this receipt register and sign of the vendor or its authorized representative while making deliveries shall be taken (with date and time along with his personal identity details) on the receipt register. Store pharmacist concerned taking the deliveries shall also sign the register against each delivery. Acknowledgement of the receipt of the items shall be given to vendor after entry in the register and signature of store pharmacist concerned and vendor or his authorized representative.

c. Entries in the register shall be maintained neatly and properly and would be final and shall not be put to question in any dispute (including before any arbitrator/ court). This should be made part of the tender document.
Wherever UDM is integrated with HMIS, all items are to be taken from UDM directly to HMIS store module.

d. Receipt register shall also keep record of the value of supplies with discounts as per the contract and total value of the supplies received from a vendor.
Receipt register shall also be maintained in UDM, wherever UDM is integrated with HMIS.

e. Performance register will be maintained by the store pharmacist concerned and shall be countersigned by a medical officer (doctor in-charge of store at that unit). It will have record of all-Failures in supply, delay in supplies, failure related to right quantity/quality/brand as asked for etc.

f. Bill should be verified by Pharmacist in charge of local purchase and by the doctor looking after the medical stores before same is submitted to the bill passing authority i.e. - hospital in charge i.e. MD (for Central hospitals) / CMS (for Divisional Hospitals)/CMO (PUS) OR nominated SAG/ JAG IRHS Officer, not below the rank of DMO. In case no SAG level medical officer is posted/available and SAG/DACP is looking after the work of

SAG, SAG/ DACP may be nominated for bill passing. For timely payment to vendors, schedule for processing of bills should be decided in consultation with finance.

g. Payment should be online directly to the vendor's bank account and all care shall be taken to ensure that bills are cleared within a reasonable period of time to be decided in consultation with Associate Finance.
h. System of ordering, receipt, accountal and payment of Local Purchase items should be digitized through integration of UDM with HMIS within 3 months.
i. Fund for Local purchase is not to exceed 15% of the budget allocated to that unit. If it is proposed to exceed, approval of PCMD is to be taken.

Reference: Letter No. 2017/H/4/1/Local Purchase (E-3236402) dated 31.07.2023 is issued and signed by Chandan Kumar, Director Railway Stores (IC), Railway Board and Dr. Praval Pant, Director (IH), Railway Board and given to The General Managers, All Indian Railways/PUs, NF(C), CORE, DG/RDSO/Lucknow, NAIR/Vadodara, PCAO, PLW/Patiala, COFMOW, CAO, WPO/Patna. RWP/Bela, CMDs/ MDs of Indian Railway PSUs/Autonomous Bodies / Societies.

List for Distribution:

Directors of all CTis, PCMMS, PCES, PCMEs, PCEES, PCSTES, All Indian Railways & PUS, COFMOW, CORE, WPO/Patna and RWP/Bela Sr. Prof. (Material Management), NAIR, Vadodara, ED (Stores), RDSO, Chief Commissioner, Railway Safety, Lucknow Zonal Railway Training Institute, Sukadia Circle, Udaipur

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MEDICAL TREATMENT, ATTENDANCE RULES & FEW DEFINITIONS

55

55.1 Authorized Medical Officer:

The Railway Medical Officer within whose jurisdiction the employee is headquartered or one who is specially nominated for the purpose. Jurisdiction is 2.5 km radius from health unit/hospital or 1 km radius from station.

55.2 Railway Beneficiaries:

1. Employees with family members & dependent relatives (as defined in the pass rules).
2. If both husband & wife are railway employees. (Can choose as per status).
3. Retired Employees (Registered under RELHS).
4. Officers and Staff of CRS- Free
5. Audit staff-Free if opted for Railway. This option once exercised will not be changed.
6. Railway Employees on Deputation to RITES, IRCON, etc. payment based on per capita expenditure.

55.3 Medical Attendance includes:

1. Attendance of employee, family, dependent relatives as per pass rule.
2. At consultation room, hospital/Health Unit & residence.
3. Consultation of specialist-in-house, private, honorary, state govt.
4. Referral to specialist centers.

55.4 Treatment includes:

1. Use of all medical & surgical facilities available.
2. Investigations: At Hospital, HU, Private labs & radiology facilities.
3. Supply of medicines, vaccines, sera other therapeutic substances. (Stocked/un-stocked).
4. Accommodation as per status or in higher class after certification by medical officer.
5. Nursing is ordinarily provided to in-patients in hospital.
6. Specialist consultation, recommended by Authorized medical officer.
7. Transportation: Ambulance, taxi, for going back home in special circumstances.
8. Blood transfusion charges.
9. Free diet as per rules (Basic less than Rs 44900/-)

Entitlement Of Wards In Empaneled Hospital

S. No.	Basic Pay as per 7th CPC	Entitlement
1.	Up to 47,000	General ward
2.	Rs. 47,601 to Rs. 63,100/-	Semi-private ward
3.	Rs. 63,001/-and above	Private ward

No.2016/H-1/11/69/Hospital Recognition

1. Treatment (personnel)
2. CMPS (Contract Medical Practitioner)
3. HVS (Honorary Visiting Specialist)
4. On panel Doctors (case to case basis)
5. Dental Surgeons
6. Lady Doctors at Hospitals & health Unit

7. Road Mobile van
8. Homeopathy
9. Ayurvedic

Payment to Specialists

S.N.	Type of Surgery	Revised Fees
1.	Minor	Rs. 4,000/ per case as package rate
2.	Major	Rs. 10,000/per case as package rate
3.	Special	Rs. 18,000/ per case as package rate

OPD Consultation

Up to Rs 1000/case and Rs.200/- for second case

Payment To HVS

Hours of duty	Specialist	Super Specialist
4 Hrs a Day for 6 days/week	Rs. 78,000/P.M.	Rs. 96,000/P.M.
4 Hrs a Day for 4 days/week	Rs. 48,000/P.M.	Rs. 60,000/P.M.
4 Hrs a Day for 2 days/week	Rs. 24,000/P.M.	Rs. 30,000/P.M.

Includes Treatment-Does Not Include

1. Artificial dentures
2. Massage treatment except in polio myelitis
3. Refraction & glasses charges
4. Special articles in diet
5. Charges on special immunization-except going abroad on duty or authorized leave then necessary vaccine.
6. Cottage booking, dhobi charge, attendant charge.

55.5 Medical Attendance for Family Members

A Consort:

- Wife of a railway employee, whether earning or not.
- Husband of a railway employee, whether earning or not.

B Sons:

- Under 21 years of age, provided wholly dependent.
- Unmarried sons over 21 years of age, without upper age limit, even if not a student or invalid, provided he is wholly dependent & resides with the employee.

C Daughters:

- Unmarried daughters, irrespective of their age or earning status.
- Married daughters under 18 years of age, widowed daughters, irrespective of age, provided wholly dependent.

55.6 Dependent Relatives (All Eligible As Per Pass Rules)

1. Stepsons, unmarried stepdaughters and one adopted child subject to age limit prescribed in para 601 (B) & (C) above, provided they are wholly dependent.
2. Mother/stepmother if widow.
3. Unmarried or widowed sisters / stepsisters, if father is not alive.
4. Brothers / stepbrothers: Under 21 years of age (limit not applicable to bonafide students or invalids. If father is not alive.
5. Dependent: who does not have independent income more than 15% of basic of the employee or Rs.3000/ whatever is higher.

Admissible

1. All R.R.B. Staff
2. Advanced Permanent Way Training School- Pune
3. Director Rail Movements- Kolkata
4. Chief Mining Engineer
5. Deputy Dir. Rly. Stores (Steel) – Kolkata
6. R.D.S.O.
7. D.L.W.
8. Railway Rates Tribunal –Chennai
9. I.C.F. Perambur
10. R.E.
11. Metropolitan Transport Projects

Admissible

1. MR, MOSR, Deputy Minister for Railway, Under RELHS-97 after they demit office.

2. This is applicable to previous incumbents.
3. Widow mother-in-law, of the widow on her appointment on compassionate grounds- as income of widow mother-in-law within prescribed limit.

Special Beneficiary & Permissible Treatment

Beneficiary	**Permissible treatment**
GRP Personnel	Medical Facilities if agreement of State Government with Railway
Private servants	Free OPD treatment for routine illness, 40% charges for indoor treatment
Railway Contractors & their Labour	No free treatment
Licensed Porters	Free OPD and indoor treatment to self &family. Referral to other railway hospital/health unit also allowed.
Railway employee on deputation with Trade Unions	Free
Trade Union officials who are ex-Railway employee and at all India/Zonal Level	Free up to retirement age then RELHS
Up to Divisional Level	Not Eligible till retirement age then RELHS
Employees of Quasi Railway Organizations, e.g. Co-operative society, Statu. Canteen, full time worker with AIRF,NFIR/ZONAL UNION, Railway Institute, Officer's Club	Free OPD treatment to self and family, Indoor treatment free to self but on payment for family.
Licensed shoeshine boys	Free OPD treatment. To self only. (Med. ID. card with photograph).
Outsiders	No free treatment except family planning operation and immunization. (Consultation charges Rs.40/-valid for 15 days and

	separate charges for investigations, indoor treatment, Surgery etc.)
Railway passengers falling ill on train	Consultation fee Rs. 100/- & separate charges for medicines supplied
Freedom Fighters Travelling on a valid Ist class pass	Free Railway medical facilities
MR,M.O.S.R, Deputy Minister for Railway	Under RELHS-97 after they demit from the office. This is applicable to previous incumbents.
Widow mother-in-law of the widow on her appointment on compassionate grounds	Free full treatment- Income of widow mother- in-law should be within prescribed limit.
Medical attendance at residence	Free for Railway Employees, visit fee for family members.
Special provision for female & Child beneficiaries	They may directly obtain treatment from private hospital where no Railway /government hospital & get reimbursement.

55.7 Medical Attendance & Treatment Rules

Dental Treatment-

Facilities of part time/full time dental surgeon posted at the Railway hospital. Where there are no facilities, referral by Railway medical officer for outside dental treatment & reimbursement of expenses up to the limit given by Railway Board.

Medical Attendance & Treatment Rules

1. Medical Check pass issued to the patients referred from one hospital to other.
2. Medical Identity Card to be obtained by the Railway employee for availing medical facilities.
3. Reimbursement for referred cases as well as for treatment taken in emergency at non-railway hospitals. All claims to be preferred within six months.

55.8 Medical Treatment to Retired Railway Employee

(Retired Employees Liberalized Health Scheme) RELHS Scheme-1997

Retired employees registered under this scheme will be provided full medical treatment as serving employees. Treatment, investigations, diets & reimbursement claims at government & recognized non-railway hospitals. Also eligible for ambulance services, medical passes, home visits. Medical attendance for the first two pregnancies of married daughters at concessional rates. Treatment of private servants as applicable to serving employees.

Eligibility For RELHS

1. Employees who have completed 20 years' service and fulfill other criteria to make them eligible for post-retirement complementary passes.
2. RELHS-97 is mandatory for all Railway employees retiring on or after 31/05/2012.
3. A minimum of 20 years of qualifying service in Railways will be necessary for joining the scheme.
4. The condition of minimum 20 years of qualifying service for joining RELHS-97 is not applicable in the case of medically invalidated employees and the spouses of employees who die in harness.

Eligibility For RELHS

1. Surviving spouse of the deceased retired railway employee who died after superannuation is eligible to join RELHS-97.
2. RELHS is not open to Railway servants who resign from service.
3. Resignation submitted by the Railway employees on permanent absorption in PSUs is to be taken as "Technical Resignation" and that they should be permitted to join RELHS-97.
4. Employees who are dismissed from service are not eligible to join RELHS-97.
5. Family/Dependents Family members and dependent

relatives, who are eligible under Pass Rules are eligible for treatment under RELHS.

RELHS Scheme-1997

1. Those who resign from service will not be entitled to this scheme.
2. Members of the old RELHS Scheme will automatically become members.
3. Switch over from CHSRRE.
4. The department will issue a RELHS card with photographs of the employees & dependents.
5. Contribution from employees for RELHS:

SN.	As per 7th PC Level	Contribution Rs.
1	Level 1-5	30000/-
2	Level 6	54000/-
3	Level 7-11	78000/-
4	Level 12 and above	1,20,000/-

55.9 CTSE- (Cashless Treatment Scheme in Emergency)

1. This scheme was launched to provide a cashless treatment facility for retired employees in emergency situations.
2. A smart card with bar code is provided.
3. In emergencies they can go directly to empanelled hospitals. They have to deposit some amount at the time of admission as per their entitlement of ward accommodation.
4. Hospital contacts Railways within 24 Hrs, if emergency is established then treatment cost is born by railways otherwise patient has to bear the cost.
5. One time contribution has to be paid for procuring the Smart card (CTSE).

SN.	Entitlement	Contribution Rs.
1	General ward	10000/-
2	Semiprivate ward	25000/-
3	Private ward	50000/-

55.10 Treatment during Railway Accidents

1. **Medical treatment of Railway passengers involved in accidents/untoward incidents**- by sending them to nearby Government/Railway/Private Hospital (if others are not available)--Emergency and Essential treatment only.
2. **Trespassers-**Providing emergency medical treatment and also sending to nearby Government hospital. But this aid does not bestow any right to the injured person to claim compensation cover under section 147 & 156 of Indian Rly Act 1989.

Duties of Railway doctors in urgent cases:

Whenever a Railway employee calls upon a Railway Medical Officer for medical assistance either for himself or for any member of his family or dependent relatives, the doctor so called upon shall, if the case is represented as urgent, render such assistance as may be necessary without hesitation, leaving the question of his being the Authorized Medical Officer and fees etc. to be inquired into and settled afterwards.

(Rule 632- R.I. 1995 reprint)

Issue of Passes under medical advice:

(1) Special Passes on medical grounds will be issued for journey from station nearest to the residence of a Railway servant where Railway medical facilities for treatment of the railway servant or his family members are not available to a station where railway dispensary or hospital or sanatorium with the required facilities for treatment is located. Passes will ordinarily be issued for the class of entitlement of the railway servant on privilege account. The grant of higher class passes and attendants on medical grounds shall be regulated as under:-

(2) If the Medical Officer considers that the patient should be

accompanied by an attendant during travel for his journey to an outstation for treatment the inclusion of the attendant in the Railway pass shall be regulated as under:-

(a) One attendant may be allowed, on the recommendation of the Medical Officer in-charge of the hospital, heath unit /polyclinic, if the patient is bed-ridden and is unable to sit up.

(b) If the patient is in big plaster, or physically handicapped or unconscious or paralyzed or mentally retarded, where one attendant cannot lift the patient, two attendants in the same class may be provided on the express recommendation of the Medical Officer. In cases where the patient is in coma/shock/stupor due to any cause(irrespective of T.B/ Cancer) such as head injury etc., a higher class pass along with an attendant in the same class may be given on the recommendation of the Medical Officer.

(i) Provided that the facility of an attendant shall be available only when no other family member is accompanying the patient. Such passes where an attendant has been allowed should, therefore, be restricted to the patient and the attendant only.

(ii) Provided further that higher class passes shall be allowed only for outward journey while proceeding for treatment to an outstation. After the patient recovers, the return journey pass shall be issued for the class to which the patient is entitled. Where an attendant is allowed to accompany the patient, he shall be issued second class pass for the return journey.

(iii) In case, higher class pass to the Railway employee for his return journey has also been considered necessary specific recommendation of the C.M.D of the Railway in whose jurisdiction the hospital is located shall be necessary.

(iv) Pass for the return journey of the entitled class or the higher class as the case may be shallbe issued on the recommendation of the C.M.D of the Railway in whose

jurisdiction the hospital is located. To facilitate the issue of passes by that Railway stamped endorsement authorising that Railway for issue of the medical passes may be made on the pass when it is issued for outside journey.

(v) In cases where a Railway servant falls seriously ill outside the Zonal Railways on which he is working and is referred to a hospital located on another station for specialised treatment by the Railway Medical officer, he may be given a special pass available from that place to the location of the hospital/dispensary to which he has been referred to and back to the same place. The concerned medical officer recommending the grant of the pass shall report the facts of the case to the controlling C.M.D of the employee indicating clearly reasons that necessitated the treatment at an out station in support of his recommendation for issue of a Special Pass.

(3) The Medical Officers recommending the issue of passes on medical grounds shall submit a monthly statement to the concerned C.M.D indicating the circumstances of each case and the reasons for recommending such passes. C.M.D should ensure that the recommendations of the Medical Officers for issue of Passes were in accordance with the guidelines of these orders.

(Ministry of Railway's letters No.1000/TG/3 dt. 07/11/1949, No.E/W/89/P.S 5-1 dt. 20/03/1990, No. E/(W)/82/PS5-1/15 dt. 05/01/1985 and No. E(W)2003PS5-1/9 dated 01/09/2003).

Use of ambulance cars by lady doctors in emergencies:

(1) Lady doctor, when called to visit a patient, may be allowed the use of ambulance cars not only for going to the patient's house and also to bring her back to her residence/hospital, in the following circumstances:

(a) When she has to attend an emergency.

(b) When the call for a house visit is received by her from a

remote area.

(c) When the call is received from an unknown quarter.

(d) When the call is received at night.

(2) Validity of the points made for eligibility of use of the ambulance cars would be decided by the head of the hospital concerned.

(3) It is not necessary that on the visit, the lady doctor should bring the patient for admission if it is considered not necessary to admit the patient.

(4) No mileage allowance would be admissible to the lady doctor for such calls. If she draws any consolidated conveyance allowance, there would be automatically proportionate deduction in the same for such use of ambulance car.

(Ministry of Railway's letter No.76/H/22/16 dated 18th January 1977).



Elphestone college in 1860s, now this building converted into Central Railway Hospital Byculla. | Historical india, Mumbai, Bombay

UNIQUE MEDICAL IDENTITY CARD (UMID)

56

Unique Medical Identity Card (UMID). The module is envisioned as a hope for better service delivery to the medical beneficiaries in Indian Railways.

1. UMID is a web application which will generate smart Medical Identity Cards, with unique all India numbers and issued to the employee pensioner as well as each dependent, individually & separately
2. Web and Mobile application for e-validation of identity of Railway Medical beneficiaries.
3. Registration, Approval and Card Generation Process is done completely on electronic platform. This includes the continuous revision of beneficiary details dynamically.
4. End-to-end solution for Medical Identity with complete Rule integration with built-in validation.
5. Humanistic Technology & Good Governance elements combine to deliver Customer convenience and flawless Service
6. Card-independent system: Biometric & QR code systems along with integrated database of Pan Indian Identity numbers (PF

no./PAN/ Aadhar / PPO / Registered Mobile No. etc) to facilitate identification and validation without physical card also.

7. Universal Applicability and Scalability to use the same software for any number of units or for Indian Railways as a whole.
8. Continuous Validation mechanism for regular updation of beneficiaries with back-end process. Thereby the cards are updated automatically for downloading anytime by employees in their mobiles or computers. QR code & Medical ID card Numbers remain unchanged while the details get dynamically updated in the database.
9. Registration for change of Health Units across units is facilitated on online application.
10. Hospital-wise Registered users database will facilitate debits and credits initiation for Inter Hospital Administration.
11. Interfacing with Hospitals for automatic generation of OPD slips.
12. Interfacing with Referral Hospitals plausible for authentication through Biometrics
13. Interfacing with Hospitals tied up under CTSE scheme is possible for authentication through Biometrics.
14. Dynamic updation of Level of entitlement of Hospital Wards for Medical beneficiaries in Railway empaneled Hospitals as per the Rly. Bd's Lr.No. 2016/01/11/69/Hospital Recognition, dt.08.05.18.
15. Colour schemes of the card are adopted as per the Rly. Bd's Lr. No. 2018//Trans.Cell/Health/Medical Card, dt. 04.01.2019to identify the beneficiary separately and apparently as employees (Blue Blue strips); Pensioners (Green Green Strips); Dependents (Blue/Green - Yellow strips).
16. The Numbering scheme is adopted to remain unique across all the units in Indian Railways so as to facilitate availing medical

services from any other units by their unique identification and validation.

56.1 Access to Web site

Use the following URL to access to the web site for all the services related to Medical Identity Card www.digitalir.in/umid/

This web site can be accessed through PCs & Mobile browsers having internet connection. It is not restricted to Rail Net connection.

The mobile users can access to the application from Google Play Store under the following logo (UMID - Indian Railways) Indian Railway.

56.2 Checklist for Submission of Application

As a ready reckoner the following is the check list for mandatory fields and documents to be scanned in JPEG/JPG/PNG format for advanced preparedness to initiate the application in a full-fledged manner.

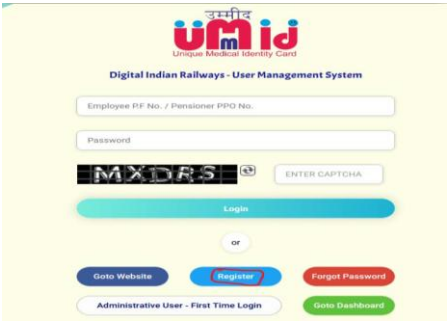
1. Photograph of Employee & all the dependents.
2. Signature of Employee.
3. Old Medical ID card of employee OR Pass/PTO declaration with Supervisor signature & Stamp.
4. ID proof of all individual dependents.

Relation with employee	Marital Status	Documents required
Mother	Widow	Father Death Certificate
Step-mother	Widow	Father Death Certificate
Son	Unmarried	If student above 21 yrs, Bonafide Certificate
Daughter	Divorced	Divorced Degree
Daughter	Widow	Marriage Certificate & Death certificate of her husband
Step-son	Unmarried	If student above 21 yrs, Bonafide Certificate
Step-daughter	Divorced	Divorced Degree
Step-daughter	Widow	Marriage Certificate & Death certificate of her husband
Brother	Unmarried	Father Death Certificate and If student above 21 yrs, Bonafide Certificate
Step-brother	Unmarried	Father Death Certificate and If student above 21 yrs, Bonafide Certificate
Sister	Unmarried	Father Death Certificate
Sister	Divorced	Father Death Certificate and Divorced Degree
Sister	Widow	Father Death Certificate, Marriage Certificate & Death certificate of her husband
Step-sister	Unmarried	Father Death Certificate
Step-sister	Divorced	Father Death Certificate and Divorced Degree
Step-sister	Widow	Father Death Certificate, Marriage Certificate & Death certificate of her husband

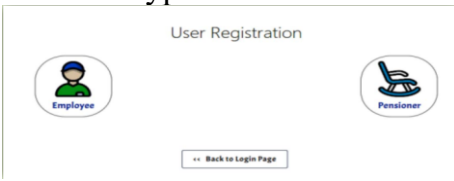
In case of Physically / Mentally challenged dependents – Railway Doctor Certified Medical certificate to be uploaded.

56.3 Employee Registration Process

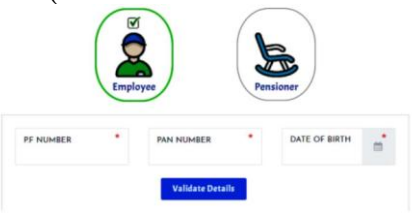
1) Employee has to click on 'REGISTER' on Website Homepage: digitalir.in/umid (or) Go to the Log-in Page and click on 'REGISTER'



2) Employee has to Select Type of User as 'EMPLOYEE'

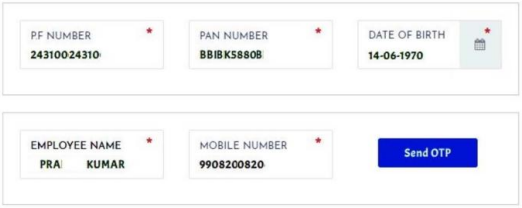


3) Now three Validation fields will be displayed for input:
   a. PF Number (It has to be 11-digit Alphanumeric code).
   b. PAN (It has to be 10 digit Alpha Numeric code).
   c. Date of Birth (It has to be in DD-MM-YYYY format)



4) After entering the particulars, the employee has to click on 'VALIDATE Details' button
5) Now the NAME of the employee associated with the validated particulars will be displayed for confirmation.

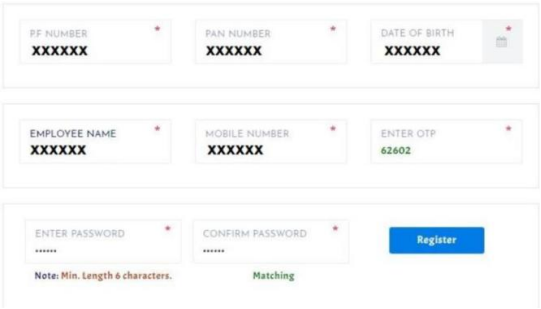
6) If details are matched, employee can proceed to Register MOBILE NUMBER.



7) OTP will be sent on the provided mobile number which has to be fed to VERIFY OTP.



8) After confirmation of OTP, the system will prompt for SETTING PASSWORD.



9) Now the Employee is ready to LOG-IN with PF Number as User ID & Password as set in the Registration process.

56.4 Employee Log-in & Dashboard

1) Employee has to go to the Log-in Page (digitalir.in/umid)
2) Enter the user credentials:
   a. PF Number as User ID

b. Password as REGISTERED

3) Select User Role as EMPLOYEE/ADMINISTRATOR on top of the page. (This step is required only if the Employee has been assigned with Admin rights).
4) Click on the UMID (Employee) Tab on the Dashboard



5) Now the Side-bar MENU will be available for view on the left side.
6) You will find 4 items in the Menu for navigation:
   a. DASHBOARD (To view the employee Basic particulars fetched from backend database).
   b. INITIATE APPLICATION (To start the Application process)
   c. MY APPLICATION STATUS (To track the status of the application after it has been submitted)
   d. VIEW/DOWNLOAD MEDICAL CARDS (To view the cards after they are generated)

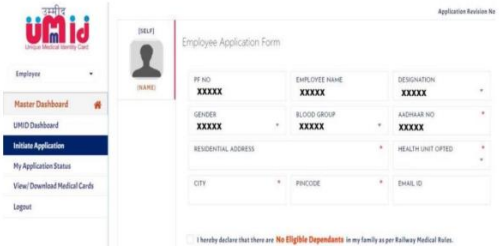


56.5 Verification of Back-end Data (EMPLOYEE)

1) The user has to LOG-IN as EMPLOYEE
2) Go to the MENU on the Side-bar and click on DASHBAORD
3) BASIC DETAILS are displayed on the main page for verification.
4) If details are found correct, then PROCEED for INITIATING THE APPLICATION process.
5) In case of ERRORS, there are 2 REMEDIAL ACTIONS suggested:
   a. Approach BILL CLERK for RECTIFICATION in IPAS.
   b. Approach ADMIN to UPDATE in UMID

56.6 Employee Application Process

1) Employee has to LOG-IN in the UMID Portal.
2) Go to the MENU bar and click on INITIATE APPLICATION. (Application form will have 2 stages for SELF & FAMILY).
   A) **SELF Form:** It is a simple form, and it requires bare minimum fields since the most of the required information is already maintained in the backend data taken from IPAS.
      1) The employee form requires input for 6 fields only. They are Gender, Blood Group, Aadhar number, Address, Hospital opted and email.



      2) After entering these details, there is a declaration option if there are 'NO ELIGIBLE DEPENDENTS' in the Family. If yes, it will cut short the Family Form. If not, this declaration can be ignored.
      3) By clicking on VALIDATE button, the details will be saved

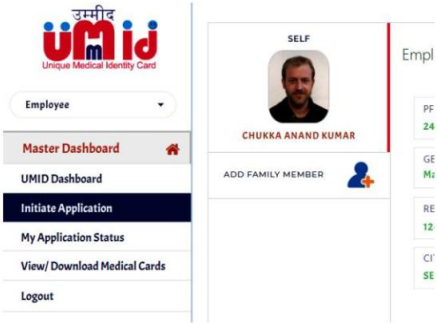
and employee can proceed to UPLOAD DOCUMENTS.



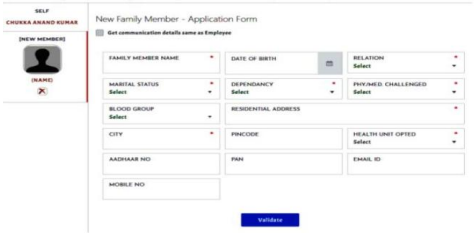
4) To UPLOAD DOCUMENTS the Employee has to select the files from Mobile or a PC. Normally 3 documents are required for uploading in Employee form. They are photograph, scanned Signature and old medical card. If old medical card is not available, then the Pass/PTO declaration form can be uploaded duly countersigned by Supervisor/Controlling Officer. In addition, any other relevant documents can be uploaded against ADDITIONAL DOCUMENT field.
5) The uploaded images can be CROPPED & COMPRESSED by double-click on the uploaded image thumbnails.
6) To confirm the completion of uploading of documents, employee can click on UPDATE DOCUMENTS. With this, the employee form is completed.

B) Add Family Members

1) If you Click on ADD FAMILY MEMBER below the Employee tab, new form for family member will be displayed



2) On top of the form, Check the box to fetch the Communication details, same as in Employee form.
3) Family Form will have 13 fields to be filled up. They are Name, Date of Birth, Relation, Marital Status, Dependency, Disability status, Blood 70 Group, Address, Hospital opted, Aadhar, PAN, email and Mobile Number



4) Since there is no readily available database for family members, this information requires to be filled as a onetime measure. Although most of the information is not mandatory, the information if filled completely will help in extending more services in future for family members directly.
5) After entering the details, the employee can VALIDATE to save the particulars.
6) Based on the Family composition and conditionalities attached with dependents, the DOCUMENTS REQUIRED will be tagged by the system itself.
7) Uploading the indicated documents is compulsory. Commonly applicable documents are Photograph, ID proof, proof of Relation etc. Specific documents such as Disability Certificate, Divorse Deed etc will be variable as indicated in the Check-list.
8) By UPDATING THE DOCUMENTS, the family form gets saved. However, the same can be edited subsequently but before SUBMISSION of form. When

EDIT details option is exercised, the employee has to fill the form again and documents are to be uploaded again because the REVERSE PROCESS LOGIC will be applicable.

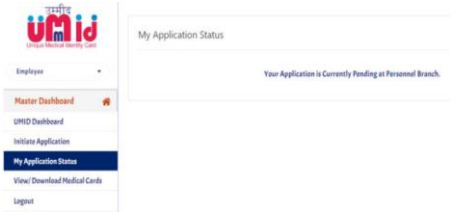
9) Any number of Family members can be added along the same procedure.
10) After adding all the family particulars successfully, the employee has to check the DECLARATION that the details are correct, and the form can be SUBMITTED.



11) Now the form is submitted, and the status of the application can be tracked under 'MY APPLICATION STATUS' in the Menu.

56.7 How to Track Employee Application Status

1) Login as Employee.
2) Go to Menu side bar and click on MY APPLICATION STATUS.



3) Status of the application can be seen on the dashboard as to with which user the case is pending currently.
4) If there are any complaints on the status of the application, the employee can raise a SERVICE REQUEST to the UMID ADMIN.

56.8 How to Download Medical Cards (EMPLOYEE)

1) Log-in as employee
2) Go to menu Sidebar and Click on VIEW/DOWNLOAD MEDICAL CARDS
3) All the medical cards of the eligible family members including employee will be displayed on the dashboard.
4) They can be saved in Mobile (or) Print on Paper/Card (or) Print only the QR Code.
5) Any of the mechanism will help the employee/dependent to show them in the Hospital counter or Kiosk for OPD slip generation.

56.9 Employee – FORGOT PASSWORD Procedure

1) Go to LOG-IN page of UMID
2) Click on FORGOT PASSWORD (at the bottom of the log-in box.)



3) Select TYPE OF USER as EMPLOYEE
4) Enter VALIDATION Particulars:
   a. PF Number
   b. PAN
   c. Date of birth
5) Click on VALIDATE button



6) Display of NAME & MOBILE Number for confirmation.
7) Enter OTP and VERIFY
8) Set NEW PASSWORD and confirm by clicking on RESET.
9) Now the Employee can login with new credentials.

MEDICAL REIMBURSEMENT RULES

57

Eligibility of Reimbursement of Medical Expenses

A Railway employee obtaining medical attendance and/or treatment for himself or a member of his family or dependent relatives should, under the extent provisions of para 633 Indian Railways Medical Manual. The railway employee has to consult his authorized medical officer first and proceed in accordance with his advice.

In case of his failure to do so, his claim for reimbursement will not be entertained except as provided hereinafter. All claims for reimbursement should be scrutinized with a view to see that the Authorized Medical Officer, or another Medical Officer who is either of equivalent rank or immediately junior in rank to his Authorized Medical Officer and attached to the same hospital/health unit as the Authorized Medical Officer, was consulted in the first instance.

Note: When a patient is referred to any Govt./recognized hospital by Authorized Medical Officer the referral covers treatment /investigations in that specific hospital only. If in the course of treatment in that hospital some investigations are required to be done at a place other than that hospital such referral should also be routed through

the Authorized Medical Officer except those cases who are taking indoor treatment in that hospital. Only those cases, (particularly those taking treatment as OPD patients in the referral hospitals), where it has been specifically certified by the Authorized Medical Officer that re-reference was done with his approval, will be considered for reimbursement.

(Bd.'s Letter No92/H/6-4/121 dt. 10/03/93)

(1) The consent of the Authorized Medical Officer is not necessary in the case of family members and dependent relatives when they go to one of the recognized hospitals. In such cases, the countersignature on the bills or of the receipts (where the bill system is not in vogue and receipts are issued for payments), by the Superintendent or other head of the hospital will be regarded as sufficient.

(Rules 604 and 618-R.I.and MOR's letters No.67/H/1/11 dated 4th March 1968 and No.71/H/1-1/6 dated 9th November 197l).

In times of medical need the beneficiary has to report to his authorized medical attendant the Railway Medical officer who will arrange treatment from a railway hospital/ a government hospital /a private recognized hospital in exceptional circumstances, the CMD can obtain permission from GM for treatment at any hospital on case-to-case basis. Hence a railway beneficiary need not go to any outside hospital on his own except in EMERGENCY

57.1 Emergency

"Emergency" shall mean any condition or suddenly and if not treated at the early symptom resulting from any cause, arising convenience, be detrimental to the health of the patient or will jeopardize the life of the patient e.g. Road Accident, MI, CVA Under such conditions, when the Railway beneficiary feels that there is no scope of reporting to his/ her authorized Railway Medical Officer and avails treatment in the nearest and suitable private hospital, the reimbursement claims are to be processed for

sanction, after the condition of the emergency is confirmed by the authorized Railway Medical Officer.

Sanctioning of Advance/Reimbursement in case of medical emergency:

Authority		**To sanction medical advance in emergency**		**To sanction reimbursement in emergency**	
		In Non-referred Government Hospital/ Autonomous Body Hospital	In Non-referred, non-recognized private hospital	In Non-referred Government Hospital/ Autonomous Body Hospital	In Non-referred, non-recognized private hospital
CMS, MD, CMO	Existing Power	Nil	Nil	Nil	Nil
	Revised Power	Rs. 1 Lakh per case without annual ceiling	Rs. 1 Lakh per case without annual ceiling	Rs. 1 Lakh per case without annual ceiling	Rs. 1 Lakh per case without annual ceiling
DRM/ CWM	Existing Power	Rs. 50,000/-	NIL	Rs. 50,000/-	Rs. 20,000/-
	Revised Power	Rs. 5 Lakh in each case	Rs. 02 Lakh in each case	Rs. 5 Lakh in each case	Rs. 02 Lakh in each case
CMD	Existing Power	NIL	NIL	NIL	NIL
	Revised Power	Full Power	Rs. 5 Lakh in each case	Full Power	Rs. 5 Lakh in each case
AGM	Existing Power	Full Power	Rs. 4 Lakh in each case	Full Power	Rs. 5 Lakh in each case
	Revised	Full Power	Rs. 10	Full Power	Rs.10

	Power		Lakh in each case		Lakh In each case
GM	Existing Power	Full Power	Rs.10 Lakh In each case	Full Power	Rs. 10 Lakh in each case
	Revised Power	Full Power	Full Power Full	Full Power	Full Power

Medical Reimbursement
in case of treatment in an emergency

Where, in an emergency, a Railway employee or his dependent has to go for treatment (including confinement) to a government hospital or a recognized hospital or a dispensary run by a philanthropic organization, without prior consultation with the Authorized Medical Officer, reimbursement of the expenses incurred, to the extent otherwise admissible, will be permitted as detailed below. In such a case, before reimbursement is admitted, it will be necessary to obtain, in addition to other documents prescribed, a certificate in the prescribed form as given in part C of certificate B of Annexure III to this Chapter from the Medical Superintendent of the hospital to the effect that the facilities provided were the minimum which were essential for the patient's treatment. In such cases, the General Managers are delegated with-

a) full powers for reimbursement of medical expenses for treatment taken in Govt. Hospitals and
b) up-to a limit of Rs.1,00,000/- (Rupees one lakh) in each case where treatment is taken in Recognized Hospitals (strictly for the diseases for which such Hospitals has been recognized) and dispensaries run by philanthropic organizations without proper referral by Authorized Medical Officer (AMO) in emergent circumstances. All cases above Rupees one lakh would be referred to Railway Board along with the Proforma as given in Annexure VI to this chapter duly filled in all the

columns.

1) In case, where the treatment had to be taken in private/non-recognized hospitals in emergent circumstances, without being referred by the Authorized Medical Officer, the General Managers are empowered to settle reimbursement claims up to Rs.50,000/- per case. It should be ensured that treatment taken in private hospitals by Railway men is reimbursed only in emergent cases and for the shortest and unavoidable spell of time. All claims above Rs 50,000/- should be referred to he Railway Board. along with the duly filled in proforma given in Annexure VI to this chapter.

Note: (ii)However if treatment is neither available at Railway Hospital nor at recognized hospitals, Zonal Railways may refer the emergent cases to Private non recognized hospitals involving the cost of treatment up to RS 50,000/-(Rupees fifty thousand only) in each case and also to release advance payment thereof, if any, directly to such hospitals. (Bd's No 2000/H/6-4/Policy dt 15-1-04)

2) Divisional Railway Managers are also empowered to settle the claims with the concurrence of their associate finance for reimbursement of medical expenses in respect of treatment taken in emergency in Government or Recognized Hospitals (except in the case of Private Hospitals where the existing procedure of taking personal approval of GM/AGM should continue) up-to Rs.10,000/- (Rupees ten thousand only) per case and with a ceiling limit of Rs.50,000/- (Rupees fifty thousand only) per year only.

Note:

i) These powers, as mentioned in sub paras 1) and 2) above, will not be delegated further to any lower authorities and will be exercised by the GM/AGM personally, duly scrutinized by CMD (CMS in the case of production units) and concurred by FA&CAO.

ii) The powers of (1) (b) above do apply for the specified diseases only for which recognition to a Private Hospital has been granted and not for treatment of other diseases. Referral of a patient to such recognized hospital for treatment other than the specified diseases in special circumstances and reimbursement thereof would continue to be referred to the Railway Board.

(Note 1&2 under Rule 617-R.I 1995 reprint and MOR's letters Nos.67/H/1/26, dated 25th January 1968 and 1st June 1968, No 91/H/6-4/4 dt. 21/02/1992,No.80/H/6-4/49 dated 24th April. No.91/H/6-4/26(pt) dt. 20/11/1995,dt. 28/05/96, No91/H/6-4/4, dt. 21/02/92 , 05/12/97 ,No.91/H/6-4/26 (Pt) dt 10/09/1999 and No 2000/H/6-4/Policy dt 6-3-2003).

Families accompanying Railway employees proceeding on tour:

(1) The medical expenses incurred on the treatment of a member of a Railway employee's family accompanying him on tour can be reimbursed, on the same scale and conditions on which they can be reimbursed to the Railway employee himself, if illness occurs during that period and treatment is taken in a Railway or Government hospital.

(2) The above concession is not admissible in a case where a Railway employee, while proceeding on tour, takes a member of his family along with him with the intention of obtaining treatment in a place other than at his headquarters.

(MOR's decision below Rule 618-R.I 1995 reprint .)

Treatment at the residence:

(1) Where, owing to the absence or remoteness of a suitable hospital (Railway or otherwise) or owing to the severity of the illness or other causes considered adequate by the Authorized Medical Officer, a Railway employee receives treatment at his residence, the expenses incurred by the Railway employee for such items and services as would have been admissible to the patient otherwise would be reimbursable.

(2) The above claims should be accompanied by a certificate in writing by the Authorized Medical Officer stating reasons for his opinion as referred to above and indicating the cost of treatment admissible to the patient otherwise. Such a cost should take into account the charges for medicines and dressings, as also the amount of fees, if any, paid to the Authorized Medical Officer. (Rule 619 R.I 1995 reprint and Note below)

Treatment in an emergency:

Payment of charges:

Payment to Government/recognized hospitals on account of hospital charges should, in the first instance, be made by the Railway employee concerned to the hospital authorities and the refund thereof claimed from Railway administration later.

Note: The State Government, where agreeable, should debit the Railway administration concerned by preferring bills for those items for which reimbursement is permissible. To facilitate payment to such Government/recognized hospitals which press for advance deposit of money for the treatment of cases referred to them, the CMS/MS in charge of the division concerned may be allowed an imprest. The holder of the imprest should submit a report for the amount spent. Further, the General Managers may sanction advance payment up to the reimbursable portion of the anticipated cost of the treatment or up to Rs.1 Lakh, whichever is less on recommendations of the C.M.D and the concurrence of the F.A.&C.A.O towards the treatment of Railway 'beneficiary' in Govt. Hospital/recognized hospitals where they are officially referred by the authorized Medical Officer. However, efforts should be made for payments through a bill system or in instalments agreeable to the concerned hospital authorities through negotiation. In order to meet some urgent requirements to save the life of the patients, DRMs of the divisions can also sanction such advance payment subject to limitations stipulated above with the concurrence of the Divisional finance and on recommendations of the CMS/ MS of the divisional hospital. However, post facto approval of the G.M in such exceptional cases must be obtained to regularize the same.

(Ministry of Railway's letters No. 92/H/4/8 dt. 18/09/1992 , 92/H/4/8 dt. 28/08/1996 and Note (1) Below Rule 608(2) and 616-R.I./and MOR's letter No.E56ME1/34/Medical, dated 6th September 1961).

Claims to be preferred within six months:

All claims for reimbursement of medical charges should invariably be preferred within six months from the date of completion of treatment as shown in the essentiality certificate of the Authorized Medical Officer/Medical Officer concerned. A claim for reimbursement of medical charges not countersigned and not preferred within six months of the date of completion of treatment, should be subjected to investigation by the Accounts Officer and, where a special sanction is accorded on an application from the Railway employee for reimbursement of any charges in

relaxation of the rules, that sanction will be deemed to be operative from the date of its issue and the period of six months for preferment of claim will count from that date.

(Note 2 below Rule 621- R.I. 1995 reprint)

Forms for preferring claims:

A Railway employee claiming refund for the expenses incurred by him on account of medical attendance and treatment in a Government/recognized hospital should prefer his claim in the prescribed forms as given in Annexure III & IV to this Chapter, accompanied by the necessary documents as indicated in those forms.

"Rounding off" of claims:

Like other payments, such as pay and allowance, the payment on account of medical expenses should also be rounded off to the nearest rupee.

Scrutiny of claims:

All claims for reimbursement should first be carefully scrutinized by the competent authorities, who, in consultation with the Authorized Medical Officer, where necessary, will disallow any claims or items, which do not satisfy the rules and orders on the subject. Thereafter, as and when the bills are received by the department concerned, they should be disposed of without delay.

Rate and schedule of charges:

(1) The rates and schedule of charges of the Government/ recognized hospitals concerned may be obtained from the respective State Government/Recognized hospital.

(2) In the case of Government/recognized hospitals, the tariff of which does not indicate the accommodation and diet charges separately, 20 per cent of the flat rate should be reckoned as diet charges.

Expenses incurred as outdoor patient:

Reimbursement of medical expenses incurred as an 'outdoor'

patient in a Railway hospital/health unit or at a Government and other recognized institution is permitted. (Rule 625-R.I. 1995 reprint.)

Items and services not covered by the definition of the term "treatment":

Expenditure incurred by a Railway "beneficiary" on items and services not covered by the definition "treatment" will not be reimbursable.

Reimbursement of cost of medicines which are neither ordinarily stocked nor available in Railway medical institutions, but are purchased from the market:

(1) With a view to minimizing the claims for refund of the cost of items which are inadmissible, the Medical Officers who are concerned with the medical attendance and treatment of patients, should bear in mind that essentiality certificates should not be issued in respect of items which are not medicines, but which are primarily foods, tonics, toilet preparations, disinfectants or appliances etc. A decision should depend on whether the drug element is small in comparison with the food content of the preparation prescribed. Further a proprietary preparation should not be prescribed if a non-proprietary medicine of similar therapeutic effect is available. Necessary guidance in this regard should be taken from the Indian Railway Pharmacopoeia with respect to admissibility of drugs/medicines for the reimbursement and which has been certified to be of therapeutic value and essential for the recovery /prevention of serious deterioration in the condition of the patient. The cost of disposable sundries shall be treated as reimbursable. The disposable sundries include gauges, bandages, adhesive plasters, I.V sets, syringes, catheters, Ryle's tubes and other disposable used in surgical and other operations.

(Bd.'s No 91/H/6-4/39 dt. 26/12/91/30/01/92, and 30/10/96)

(2) The charges for the cost of medicines which are refundable will be allowed only if the claim for refund thereof is accompanied by the cash memo and an essentiality certificate duly countersigned by the Authorized Medical Officer in the prescribed proforma as given in Annexure V to this Chapter. Every cash memo must be countersigned by the doctor prescribing the medicines and the essentiality certificate must contain the names of all the medicines prescribed and the amount incurred on the purchase of each medicine, whether or not the original prescriptions have been submitted.

Note: The underlying idea in asking for the essentiality certificate and the cash memos etc., is to make sure that the medicines were actually considered essential by the Authorized Medical Officer and that they were purchased and consumed by the patient as directed.

(3) Any sales tax paid on these medicines will also be reimbursable.

(4) The charges for packing and postage, if any, incurred will not be refundable.

(5) Ordinarily, expenses on account of the cost of medicines intended for injections prescribed at the consulting room of the Authorized Medical Officer but administered at the residence of the patient, who is a member of the family or dependent relative of a Railway employee, will not be refundable. In serious cases, however, the reimbursement is regulated vide Sub-paragraph (2) above.

(6) The State Government, where agreeable, should debit the Railway administration concerned by preferring bills or by raising debits in respect of the cost of medicines, vaccines, sera etc. not ordinarily available in hospitals, which are certified in writing to be essential for the recovery or prevention of serious deterioration in the condition of a Railway "beneficiary", who is admitted in a non-Railway Government hospital for treatment at the instance of the

Authorized Medical Officer. If the State Government concerned are not agreeable to such an arrangement, reimbursement to the Railway employee concerned would be permissible as per rules.

(MOR's decisions No.l,2 and 3 below Rule 603-R.I. and No.92/H/6-1/41 dt. 15/01/1993).

Items and services rendered in connection with medical attendance and treatment:

Charges for items and services rendered in connection with (but not included in) medical attendance and treatment of a patient entitled to Railway medical attendance and treatment facilities shall be determined by the Authorized Medical Officer and paid by the patient. (Rule 626-R.I 1995 reprint.)

Reimbursement of medical expense incurred abroad:

The following guidelines should be adopted in dealing with cases relating to requests for medical treatment abroad and matters relating thereto.

(i) As a rule, reimbursement of the cost of medical treatment incurred abroad should not be allowed.

(ii) In exceptional cases, necessitating treatment of a kind yet to be widely established in the country, where railway employees, on medical advice, choose to go on their own, reimbursement could be authorized by the Ministry of Railways, but should be limited to the expenditure that would have been incurred had such treatment been received in India in a Govt. Hospital or a recognized hospital. However, the question of reimbursement of air passage in such cases shall not arise at all.

(iii) Foreign exchange may be released to Railway employees for the purpose of treatment abroad to the same extent as is permissible to private citizens.

(iv) The facilities for specialist treatment, as available in Railway hospitals or other Govt/recognized hospitals, should be availed of by the Railway employees.

(v) To consider cases treatment of which is not available in India a

medical Board should be constituted at the Zonal Railway by the C.M.D. The Board should make specific recommendations and also give reasons for recommending treatment abroad. It should also certify that the treatment is not available in India. The certificate should be endorsed by the C.M.D & General Manager and sent to the Ministry of Railways for approval.

(Rly Bd.'s No 83/H/6-4/19 dt. 22/09/83)

Reimbursement for in-vitro fertilization for treatment of sterility:

The method of conception by In-vitro fertilization (IVF) and Intra-Uterine Insemination (IUI) techniques shall be subsidized by allowing reimbursement to a ceiling limit of 25% of the expenses incurred per cycle and limited up to a maximum number of three cycles. This subsidy will be available only to those employees whose cases have been referred to any hospital (including private hospitals and nursing homes) where such facilities are available, on the specific recommendations of the Medical Board, with the expert doctors as members, nominated by the Chief Medical Director of Zonal Railways. The acceptance of the recommendations of such Medical Board by the Chief Medical Director will be mandatory before such reference to Railway Board. (Bd.'s No 96/H/6-1/9 dt. 08/08/96 and No. 2000/H/6-3/1 dt 21/11/2000)

Reimbursement of expenses on CAT Scan:

(i) Powers have been delegated to G.M/C.M.D to settle claim of the railway employees up to Rs 10000/- for C.T Scan carried out without prior permission of C.M.D in a Govt. Hospital and even in a private institution without the prior permission of the Authorized Medical Officer in case the same had to be got done by the patient in emergency by according their post facto sanction

(ii) MD/CMS/MS of Central hospital/Divl. Hospital/workshop hospital/Production unit is empowered to sanction/reimburse

up to a maximum of Rs 10000/- for CAT scan done in Govt./recognized hospital or in any Hospital in case the requisite facilities are not available in nearby Govt./Recognized hospitals. This power will be exercised by the MD/CMS/MS in consultation with two senior doctors(one from surgical and one from medical specialty) and the proceedings of the opinion, justification and sanction recorded in the bed head ticket of the patient before the test is recommended.

(Railway Bd.'s No. 97/H/6-4 dated 09/05/97 ,No96/H/6-I/32 dt.5/3/1998 and No 91/H/6-4/26 Pt dt. Nil-03-98 ,No 91/H/6-4/26 Pt III dt. 16/12/98 and No. 99/H/6-4/Policy Dt. 20/09/2000)

Reimbursement of expenses on M.R.I:

Sanction up to Rs 10000/ to Railway employees for M.R.I investigation from Govt./recognized institution and from non-recognized institutions, in absence of such facilities in Govt./recognized institutions, will be given by the MD/CMS/MS of the Central Hospitals/Divl. Hospitals/Workshop hospitals/Production units. This power will be exercised by the MD/CMS/MS in consultation with two more senior doctors(one from surgical and one from medical specialty) and the proceedings of the opinion, justification and sanction recorded in the bed head ticket of the patient before the test is recommended.

(Bd.'s No 96/H/6-1/32 dt. 08/08/1996, No .91/H/6-4/26 Pt dt. nil-3-98, No.98/H/6-4/26 Pt III dt. 16/12/98 and No. 99/H/6-4/Policy Dt. 20/09/2000)

Note: G.M/C.M.Ds are competent to settle all claims of Railway employees for CT Scan/M.R.I up to the ceiling limit as laid down above by according their post facto approval. (Bd.'s No. 96/H/6-1/21 dt. 05/03/98)

Reimbursement of expenses on purchase/ replacement/ repair/ adjustment of artificial Electronic larynx:

Reimbursement of the cost of the artificial electronic larynx should be made to the Railway employees and their family members governed by the Railway Medical Attendance Rules on the recommendations of the DG(RHS). The payment would,

however, be made by the administrative authority direct to the supplying agencies, and not to the Railway employee concerned .

(Bd.'s No 82/H /6-1/21 dated 11/10/1984)

Reimbursement of the cost of Heart Valves, Heart Pacemakers and Pulse Generators etc.:

(i) Supply of Heart valves, Heart Pacemakers and Pulse Generators as well as the replacement of Pulse Generators in the case of a Railway "beneficiary" will be made only on the recommendation of the Chief Medical Director, the administrative authority directly making the payment to the supplying agencies and not to the Railway employees concerned. The ceiling limit of the cost of VVI pacemaker is Rs 60,000/-This payment may however be made to the beneficiary on production of valid documents and on the recommendations of the authorized Medical Officers (AMOs) in case the implantation has been done at Govt/Private hospitals, in emergent circumstances. The reimbursement would be limited to such an amount which would have been otherwise paid by the Railways Hospital for same device if procured by them.

(ii) In cases where the cost of VVI pacemaker exceeds the limit of 60, 000/- the same would continue to be referred to the Ministry of Railways duly certifying the reasonability of its cost by CMD/GMs of the concerned Railways /Production units and concurred in by their FA&CAO for consideration and approval

(iii) Delegation of powers referred to above in para (i) above does not authorize the zonal Railways to allow reimbursement of part payment from the overall claim and send the proposal to Bd's office for reimbursement of balance amount.

(Bd's No 2000//6-4 /Policy (pacemaker) dt 21-2-3)

Hearing aids:

Rs 2500/- or the cost of hearing aid, whichever is lower, can be reimbursed by the Chief Medical Directors. The administrative authority would make the payment involved direct to the supplying agency and not to the Railway employee concerned. Cases of hearing aids costing above Rs 2500/- should be referred to the Board, duly concurred by FA&CAO, for consideration and approval.

(Bd.'s No 85/H/6-4/28 dt. 28/08/96)

Intra-ocular lens:

The cost of intra-ocular lens implant surgery done in Government hospitals, when the facility is not available in Railway hospitals, will be reimbursed in full. When the I.O.L surgery is done in non-Railway recognized hospitals, the actual cost or Rs. 12000/- whichever is less, each eye will be reimbursed. However stringent scrutiny shall be made by ophthalmologists and only complicated, high-risk cases be referred with adequate justification be referred to non-railway hospitals.

Zonal Railways may deal with and settle the reimbursement claims for I.O.L lens implantation surgery done in non-railway/non recognized hospitals , as per the new rates, on merit.

(A) **Dental Treatment:** Subject to conditions laid down in para 647 the cost of dental treatment will be re-imbursed at the following rates.

(i)	Extraction under L.A. (any tooth)	Rs. 75.00
(ii)	Extraction under L.A. of Molar tooth	Rs. 100.00
(iii)	Cement/Glass Inomer filling (per tooth)	Rs. 75.00
(iv)	Silver Amalgam/composite filling per tooth	Rs. 125.00
(v)	Root canal of Molar tooth	Rs. 600.00
(vi)	Root canal of a tooth (other than a molar)	Rs. 250.00
(vii)	Oral prophylaxis	Rs. 250.00
(viii)	Periodontal surgery(each quadrant)	Rs. 250.00
(ix)	Periodontal surgery (full mouth)	Rs.1000.00
(x)	Apicoectomy	Rs. 600.00
(xi)	Extraction of impacted tooth	Rs. 600.00

(xii)	Alveolectomy	Rs. 250.00
(xiii)	Fracture Mandible/Maxilla intermaxillary fixation	Rs.2500.00
(xiv)	Intra Oral periapical ray Dental X	Rs. 50.00
(xv)	Occlusal X ray	Rs. 100.00
(xvi)	Upper/lower full dentured (once in lifetime)	Rs.2000.00

(Bd's No.2000/H-1/12/27 Part I dt 2-9-02)

(Ministry of Railway's letters No.76/H/6-4/10, dated 16th November 1976 and 22ndJanuary 1977, No.77/H/6-1/31, dated 22nd March 1978, No.78/H/6-4/16,dated 12th December 1978 and No.76/H/6-4/10, dated 20th June 1979, No.85/H/6-4 dt. 28/08/1996 and No 92/H/6-1/41 dt. 15/01/1993, No.85/H/6-4/28 dt. 28/08/1996 , No.2000/H-1/12/27 Part I dt 2-9-02 and No. 2003/H/28/7 dt 9-5-03)

Sanction of Purchase/Work Order of medical items

For Sanction of Purchase/Work Order			
Authority	**Subject**	**Existing Power**	**Revised Power**
CMS/MD/CMO	Power to sanction work contract and Purchase Order for procurement of medical implants such as hearing aid, Bi-Pap/C-Pap and other implants to be purchased for supply/ implant to the patients & other hospital related items	NIL	Rs 5 lakh each item through quotation/ tender subject To annual ceiling of Rs.60 lakh
Sanction of Pathological Radiology Investigation sand PET Scans			
Health Unit with one doctor	Pathological & Radiological investigations		An imprest of Rs. 30,000/- subject to max of Rs. 1500/- per investigation
Health Unit with more than one doctor		An imprest of Rs. 10,000	An imprest of 60,000 subject to max of Rs 1500 per Investigation
CMS/MD/CMO	Pathological & Radiological investigations	Rs. 10,000	Up to Rs. 15,00 per investigation including CT/MRI

Engagement of Doctors & Para-medical Staff

Authority	Subject	Existing Power	Revised Power
DRM/CWM(CAO in PU)	Engagement of doctors as Contract Medical Practitioners (including part time dental surgeon)	NIL	DRM-Full Power based on recommendations of the committee headed by CMS, Sr. DPO, Sr. DFM. (One member (not below JAG) of SC/ST may be co-opted if not already on the committee to be nominated DRM/CWM
CMS/MD/ CMO	Payment of fee of doctors engaged on case-to-case basis	Rs. 500 fees for the first patient and Rs. 100/-for each subsequent patient	Rs. 1000 fee for the first patient and Rs. 200 for each subsequent patient
First engagement with approval of GM. Subsequent extensions of engagement by DRM/CWM	Engagement of doctors as Honorary Visiting Specialist (HVS)	No power to DRMS	Extension by DRM
CMS/MD/ CMO	Engagement of paramedical staff on contract basis	NIL	As per procedure laid down from time to time.
Procedure for recommending/sanction of pathological & CT/MRI investigations and PET Scans: • Treating doctor to recommend. • MD/CMO/CMS or any other doctor nominated by MD/CMO/CMS to accord approval			
CMD will have full power without any limitation in respect of pathological investigations & CT/MRI and PET Scan in respect of PU hospitals the power of CMD			

powers will be exercised by CMO.
Note: Reimbursement in each case will be governed by the CGHS policy issued from time to time.

Other Medical Matters

Medical Matter

SN	Items	Existing Power	Revised Power
1	Sanctioning limit for Transplant of Liver	Railway Board Live- Rs. 14 Lakh Cadaver - Rs. 11 Lakh	GM-Full powers (subject to CGHS policy)
2	Sanctioning of Advance Payment for Transplant of Kidney (CGHS circular 18-02- 2015)	GM-6.45 Lakh	GM-Full powers (subject to CGHS policy)
3	Powers to CWMS (SAG in charge of major workshops with major hospitals) for • Hiring of ambulances • Medical Reimbursement	CWM-Nil Power	Powers of CWMs are same as that of DRMS for • Hiring of ambulances • Medical Reimbursement
4	Empanelment of Private Hospitals for referral	Power Only with RB	GM-Full powers with finance concurrence
5	Hiring of ambulance vehicle to transport patient to the hospital in emergency	Nil	ADMO/CMP & above-Full powers to be paid from the cash imprest

57.2 Documents - For Reimbursement

1. Application of employee with reason for outside treatment
2. Reference Letter (if referred) Reason for delay (if any)
3. Delay condoned by CA
4. Attested photocopy of Medical ID / RELHS card
5. Discharge certificate (original)
6. Hospital Bills (original; verified by treating doctor)
7. Bill Summery

8. Attested photocopy of bills of pacemaker, hearing aid, prosthetics etc.; verified by treating doctor

Reimbursement-Processing

1. Application by employee with all required documents.
2. Scrutiny by nominated MO Documents complete
3. Break up of admissible & non admissible amount
4. Comparison of rate claimed with rate of nearest recognized hospital
5. CGHS rates

Reimbursement-Processing

1. Scrutiny by nominated Medical Officer
2. Establishing emergency
3. Date & Time of admission
4. Distance from residence to hospital
5. Findings at time of admission
6. Admission to ICU/Gen. Ward/Cabin
7. Date of operation/procedure if any
8. Emergency established
9. Recommended for eligible payment

Reimbursement-Processing

1. MD/CMS
2. Associate Finance
3. FA&CAO
4. CMD
5. (if not in GM's Power) Rly Board

Reimbursement – Processing

1. For treatment in Govt. Hospital
2. Recommended full admissible amount.
3. For treatment in recognized Private Hospital for condition for which it is recognized
4. Recommended for rate approved by Rly
5. For treatment in recognized Private Hospital for condition for which it is not recognized or in unrecognized hospital
6. Recommended at CGHS rates of that or nearest city

57.3 Rejection of Claim

Competent Authority

1. The competent authority to reject a claim on ground of emergency not proved is MD/CMS.
2. In a case forwarded to CMD who is not convinced of emergency, the competent authority is CMD.
3. In case of rejection on any other ground the competent authority is DRM in division & GM in zone.
4. Reason for not recommending for sanction of CA to be intimated to employee at scrutiny level.

Reimbursement special situations

Heart valves, pacemakers etc.:

1. Only on the recommendation of CMD
2. Administrative authority releases payment directly to the supplying agency.
3. In extreme emergency if the patient has procured the same, the case is forwarded to RB, by CMD certifying the emergency & the cost, duly vetted by accounts.

Reimbursement special situations

IVF for sterility:

1. To be recommended by Sr. Railway Gynecologist or prof. medical college.
2. To be done at a government hospital or government recognized center.
3. Only three cycles are permitted- amount permitted at CGHS rates.

Reimbursement special situations

Hearing Aids:

1. To be recommended by Railway or Government ENT specialist.
2. Rs.8000-9000 or the cost of aid, whichever is lower is reimbursed.
3. Costing more than this will be referred to RB after accounts concurrence.

4. The amount is paid directly to the supplying agency.

Reimbursement special situations:

1. **Intra ocular lens**: (Only If facility is not available in Rly. Hospital)
    a) As for as possible patient to be referred to another railway hospital.
    b) If done at the govt. hospital, the full amount will be reimbursed.
    c) If done in non-Railway, non-recognized hospitals, reimbursement of actual cost or Rs. 500 to 5800 depending upon the type of lens, whichever is less, in addition to the charge of package of surgery at CGHS rate.

Reimbursement special situations:

1. No reimbursement for LASIK or INTACS surgery.
2. Therapeutic and bandage contact lenses for keratoconus of corneal ulcers can be considered on a case-to-case basis.

57.4 Claim from Insurance Company as well as Railways

1. R. B. letter no. 2009/H.6-4/Policy dated 09.04.15.
2. Railway employees & RELHS
3. Total amount should not extend the expenditure
4. Beneficiary will make the first claim to the insurance company
5. Original bills will be kept by company & it will issue Certified xerox copies of bills
6. Certificate of amount reimbursed
7. Claim submitted to CMS/MD through the HU/Hospital
8. Railways will scrutinize the claim for admissible amount as per approved railway rates.
9. Reimbursement will be limited to the difference between the actual amount spent & amount reimbursed by insurance company or the amount admissible whatever is lower.

Annexure to Board's letter No.2009/H/6-4/Policy dated 09.04.2015

Illustration No.1

A. Total Medical Expenditure incurred by Railway beneficiary: Rs. 1,00,000/-
B. Amount reimbursed by Insurance Company out of (A): Rs. 40,000/-
C. Amount out of (A) which is reimbursable as per Rly approved rates/rules: Rs. 70,000/-
D. Maximum amount that can be reimbursed by Railways will be either (A-B) OR
E. Whichever is lesser than Rs. 60,000/-

Annexure to Board's letter No.2009/H/64/Policy dated 09.04.2015

Illustration No. 2

A. Total Medical Expenditure incurred by the Rly. Beneficiary: Rs. 1,00,000/-
B. Amount reimbursed by Insurance Company out of (A): Rs. 20,000/-
C. Amount out of (A) which is reimbursable as per Rly approved rates/rules: Rs. 70,000/-
D. Maximum amount that can be reimbursed by Railways: Rs. 70,000/-will be either (A-B) OR (C) whichever is lesser.

MEDICAL CERTIFICATION
(An abstract from medical manual)

58

58.1 Medical Certification for Non-Gazetted Employees

The authorized Medical Officer is the medical officer who is available within the jurisdiction of the employee is headquarters or specially nominated. He is the Medical Officer who is empowered to issue sick, fit, duty & change of air certificate.

Different Certificates Issued by Railway Doctor

1. **Sick Certificate**: - issued to employee when reporting sick.
2. **CSC / Interim Certificate**- issued when sick period is extended.
3. **Fit Certificate**- when employee becomes fit to resume duty.
4. **Transfer Certificate**: For transfer of the employee to his HQ who reported sick away from his HQ. Issued when he/she is fit to travel.

5. **Certification for recommendation** for change of air-when change of air becomes must for fast recovery. Issued by DMO and above.
6. **Duty Certificate**- when becomes fit after private doctor sickness. AMO to issue after due examination.
7. **Invalidation Certificate**-when employee is found unfit for railway service.
8. **IOD- Certificate** - Injured on duty. Entry in Injury Report Register/accident Register to be done.

Attendance during sickness- as per instructions of railway doctor. Three days certificate from RMP (Private)- do not require Duty Certificate from railway doctors.

Discharge from sick list

The authorized medical officer can discharge the employee from sick list under following condition:

1. when absent & not attending railway hospital (under sick list)
2. In cases of AEMG
3. In cases of death
4. In cases of medical invalidation

Authority to issue different certificates; for period

1. Sick & Fit Certificate

ADMO	Up to Four months
DMO/Sr. DMO	Up to Nine months
MS/CMS, In-charge of Hosp/Div.	Up to Eighteen months
CMD	More than 18 months

2. Certificate for recommendation for change of air or recuperation.

AMDO	**Nil**
DMO/Sr. DMO	Up to two months
CMS	Up to Nine months
CMD	More than nine months

3. Invalidation Certificate

1. Medical board is essential.
2. Recommendation to CMD for acceptance.

58.2 For Gazetted Employees

1. Authorized Med. Officer – CMS or In-charge
2. At Divisional HQ, ADMO/DMO/Sr. DMO/MS in-charge
3. At places other than Divisional HQ (M.O. in charge of the unit).
4. Sick/CSC/Fit Cert. in triplicate, countersigned by In-charge.
5. No provision of Private Medical certification.
6. Intimation to concerned DRM/HOD / Branch Officer.
7. Intimation/report to CMD (if more than10days).
8. Invalidation Certificate - by medical board after acceptance of CMD.
9. Grant of leave on the basis of medical certificate by competent authority.

58.3 Rules for Certification in favour of IRPFS Staff

1. Sick memo from controlling officer (IRPFS).
2. No sick certificate without sick memo.
3. Self-declaration in triplicate as per proforma.
4. In the OPD sick certificate up to 7 days.

5. If it takes more than 7 days, detailed report to MS/CMS with copy to IRPFS officer.
6. In case of indoor treatment, sick certificate up to 14 days at a time after discharge.
7. One medical officer nominated for IRPFS sickness cases.

In an emergency, first treat the staff, make a declaration & then ask for sick memo.

In case of IRPFS staff on leave / away from HQ sick memo from I/C RPF post/ SM who will intimate the concerned IRPFS officer.

Same rule for transfer certificate.

Intimation to IRPFS officer by sending one copy of declaration taken in triplicate as per prescribed format.



MENTAL INSTABILITY: MEDICAL EXAMINATION AND CERTIFICATION

59

59.1 All mental instability cases to be examined carefully

(1) Every case of mental instability is a potential medico-legal case and the Railway doctor who is called upon to examine and certify such a case, should go over it carefully and elicit all the relevant points. The proforma for recording the examination points is given in annexure XXII to this chapter.

(2) He should particularly be careful to see whether the case is genuine or feigned insanity.

59.2 Term " Mental Instability" to be used

(1) While certifying a case of mental diseases under treatment the Railway doctor should certify the case as "mental instability" and should not use the term 'insane' or 'mentally deranged'.

(2) Further the doctor should be well conversant with terms like "delusion"," hallucination," "illusion," "impulses", " obsession" and "lucid intervals", etc., as these are often used in giving evidence in a court of law.

The medical officer should also make every effort to differentiate between Psychosis and Psychoneurosis.

59.3 Procedure to be adopted by the Railway doctor when a Mental case reports sick

(1) If a person is placed on sick list for mental disability, an intimation should be sent to the CMS/MS in-charge of the division concerned without delay. If the person is non-violent, he should be admitted for observation in In-door. If the person is violent, the CMS/MS in-charge of the division should be advised and he will arrange to visit the patient at the headquarters of the patient, as soon as possible, after receiving the information.

(2) If a person has reported sick on a private medical certificate, it is for the department to accept or refuse the same. If the opinion of the medical department is sought by the employing department, the procedure outlined in the preceding para should be followed.

59.4 Declaring mental cases fit for duty

(1) In medical board on mental cases, Railway's own Psychiatrist or a Government mental specialist should be a member. If this is not possible, the CMS/MS in-charge of the division may declare a mental case fit, if a certificate from a mental specialist is produced and he agrees with the recommendations contained therein.

(2) When a person appears with a fit certificate from a private medical practitioner, with a view to taking up duty, the case should be referred to CMS/MS in-charge of the division, who will examine him and may insist, if necessary, on the production of fit certificate from a mental specialist.

59.5 Procedure for admission of a case to a mental hospital

(1) A nearest relative, who has attained the age of majority, should apply to the Magistrate by a signed petition, supported by two medical certificates, one of which should be from a Government Civil surgeon and the other from a medical practitioner with a minimum qualification of a M.B.,B.S. degree. These certificates should be independent of each other. The application should reach the Magistrate within seven days of the issue of the medical certificates. On the strength of these, the Magistrate will issue reception order for admission of the person to a mental hospital, provided there is room for admission, the superintendent of the hospital is willing to take the patient, and the petitioner is willing to pay the staying charges of the hospital.

(2) Railway employees themselves are governed by the rules contained in section D of Chapter VIII of this Manual.

59.6 Discharge of a patient from a mental hospital

(1) The patient when cured will be discharged from a mental hospital on being certified by the Superintendent.

(2) Even if the patient is not fully cured, he may be discharged from the mental hospital on the written application of the relative to the superintendent that he will look after the patient, provided of course, that the patient should not be dangerous to himself or others.

59.7 List of posts in which staff having recovered from mental diseases should not be employed

(a) Any duty which will entail the charge of a locomotive or a moving vehicle, for example Driver, shunter, Guard etc.,

(b) Any duties connected with locomotives or moving vehicles where interference by the employee in charge may result in disaster.

(c) Any duties connected with signalling.

(d) Any duties in connection with running trains which would subject the individual to great mental strain for example, :" control duty".
(e) Any technical duties involving more than ordinary strain and self-control.
(f) Any duties connected with the travelling public which demand a firm control over temperament for example, Platform inspector, assistant station master, Booking clerk, Ticket collector, etc.,
(g) Any duties which involve a higher financial responsibility than ordinary clerical duties, for example Pay clerk, Cash witness, etc.
(h) Any duties in which loss of control or a relapse of the disorder may result in loss of life and damage to the property.
(i) Any other employment in the Railways, which although not specified above, is considered by the head of the department or the Divisional Railway Manager to be unsuitable for the Railway employee who has been subject to mental instability and is quite possibly liable to recurrence.

DRUNKENNESS: MEDICAL EXAMINATION AND CERTIFICATION

60

60.1 Definition of "drunk"

A person is 'drunk' when he is so much under the influence of an intoxicating drink or drug as to lose control of his faculties to such an extent as to render him unable to execute safely the occupation at which he is engaged at the material time.

(Ministry of Railway's letter No.69/H/3/26 dt. 03/01/1970)

Note: Policy Guidelines for Drunkenness on Duty

Railway Medical Officers are to be conversant with the policy, techniques and procedures about the collection of blood samples for the presence of alcohol to detect drunkenness on duty.

Item No 1. Safe limits of Blood Alcohol Content (BAC)
No. alcohol is admissible in the blood of staff working on the trains and zero blood alcohol levels are admissible . The above direction is in conformity with Railway Board's Directorate's letter No. 2001/Safety-a/23/4 dated 27th Nov. 2001. It is possible that there could be a significant time gap between the consumption of alcohol by an individual and the time at which blood samples are collected and analysis, which may result in some time related depletion of alcohol content.

Item No. 2 Authorization of Railway Medical Officers, for collection of blood.
Railway Medical Officers are authorized to collect blood Samples and send them for

analysis.

Instructions already exist regarding collection of blood samples for estimation of alcohol content form staff that is involved in railway accidents. If any person refuses to give his/her blood sample , when administration order it, then a departmental action can be initiated against him/her for insubordination. All cases of refusal should be recorded and got witnessed by a third person.

Item No. 3 Procedure and modalities of blood collection and testing.

Instruction already exists regarding collection of blood samples from loco engine crew and guards of trains involved in accidents. Serum or plasma is by far, ideal specimens for estimation of alcohol. It is possible that the procedure i.e. collection of blood and subsequent analysis in a lab may take some time and cause depletion in the levels. The samples are be collected preferably in two separate glass receptacles.

1) One containing anti-coagulant crystals/solution and
2) A plain dry clean bottle.

The following anti-coagulant/preservatives can be used for preservation of blood samples.:-

1) Sodium fluoride in concentration of 20 mg per each ml of blood , or
2) A mixture of Sodium citrate and mercuric chloride @ 0.5 mg sodium citrate and 0.1 mg of mercuric chloride per each ml of blood.

Certain points to be observed for collection of blood specimens are:-

I) For collection of blood, 5 no. of vaccuutainers or glass bottles of 5 ml size with a stopper are to be kept in ARME Scale I/II, Pomka/emergency medicines almirah of the hospital/Health Unit.

II) A total of 10 ml. of blood is to be collected @ 5 ml each in two glass receptacles one plain & dry and another with an anticoagulant preservative and stopper

III) The sample should be properly sealed and labeled before sending it to the laboratory for analysis.

IV) Signature of the employee whose blood sample has been collected should be taken on label applied to glass receptacle and on the memo sent to the lab along with the blood sample.

V) The blood sample collected in the plain glass receptacle should be sent for analysis immediately and the sample collected in the glass receptacle with preservative should be kept in safe custody for analysis, at a later date if needed.

VI) Skin to be disinfected with a non-alcoholic product to avoid contamination of the sample , e.g. Benzalkonium chloride, Aqueous mertheolate, Thiomersal, Povidone iodine, etc. Adequate amount of above-mentioned antiseptic should be kept handy along with vaccuutainers/glass bottles.

VII) The sample should be sent to a well-equipped laboratory immediately and if stored should be kept in a refrigerator at a temperature between 2 and 8 degrees Celsius

VIII) The samples can be got tested at any Govt. or private lab at the earliest.
(Bd's No 99/H/7/C. Rly dt 15-12-2003)

60.2 All drunkenness cases to be examined carefully

(1) Every case of drunkenness is a potential medico-legal case, and the railway doctor called upon to certify such a case should make a careful examination and should note down every important particular.

(2) Railway doctor may also have to issue drunkenness certificates to persons presented by police at places where there is no civil hospitals or dispensaries and only a Railway hospital or health unit exists.

(3) In places where prohibition is in force, it is an offence even if one has imbibed alcohol, let alone getting drunk. When such a case is brought, the Railway doctor should carefully examine the case and certify as to whether (a) the person has imbibed alcohol but not drunk or (b) the person is actually drunk. i.e. under the influence of alcohol.

(4) The proforma for recording of particulars of a suspected case of drunkenness is given in annexure XXI to this chapter. This form should always be kept handy as the Railway doctor may be called upon to certify drunkenness at any moment and sometimes away from his headquarters.

(5) It is desirable that a Railway doctor, when certifying cases of drunkenness, should base his opinion on the following considerations.:-

(i) Whether the person concerned has recently consumed alcohol.

(ii) whether the person concerned is so much under the influence of alcohol as to have lost control of his faculties to such an extent as to render him unable to execute safely the occupation in which he was engaged at the material time.

(iii) Whether his state is due, wholly or partially, to a

pathological condition which has caused symptoms similar to those of alcoholic intoxication, irrespective of the amount of alcohol consumed.

(6) He should not certify the case as drunk just because the patient is smelling of alcohol. The quantity taken is also no guide, but the fact of impairment of his capacity to perform his duties has to be taken into account.

Instructions regarding issue of certificate of drunkenness:-

(1) When a railway doctor is called upon to certify a case of drunkenness in a Railway employee, he should after careful examination, immediately report by a telegram or urgent letter his opinion to the immediate superior or Divisional Officer of the employee concerned intimating whether the employee has to be put off duty or not.

(2) When a Railway doctor is asked to certify the crew of a running locomotive and if on examination, he finds a member of the same under the influence of alcohol, he should immediately issue a memo to the authority concerned to put the person off his duty.

(3) As far as possible, a senior doctor should undertake to examine such cases of drunkenness rather than depute the juniors, and in case of doubt, should refer the case to the C.M.S/.M.S in-charge of the division.

MEDICAL AID AT THE TIME OF RAILWAY ACCIDENTS

61

61.1 General Policy

(1) The general policy in the case of Railway accidents in which casualties occur is that of rapid evacuation after rendering immediate and necessary first aid treatment. This is always preferable to prolonged detention and elaborate treatment at the site of accident as the time factor is of paramount importance in removing the injured persons to the nearest hospitals by the first available means of transport to enable all necessary medical aid to be rendered.

(2) It is, therefore, essential that the Railway doctors know thoroughly their duties not only when called upon to render medical aid to the injured but also in connection with the preparations made by the Railway administration to deal with accidents and the maintenance and use of accident relief medical equipment.

(Ministry of Railway's letter No. 383.T.G/dt. 31/3/1951)

61.2 Types of accident Relief Medical Equipment:

With a view to provide prompt medical aid, the following types of accident relief medical equipment are provided on the Railways.

(1) Scale I - in medical vehicles, as part of accident relief trains. Contents as per Annexure I

(2) POMKA (Portable Medical Kit for Accidents)-in all health units, polyclinics and sub divisional, divisional and zonal hospitals, (Annexure II)

(3) Scale II- in boxes, at specified stations.(Annexure III)

(4) First aid boxes in all stations dealing with passenger traffic, workshops, marshalling yards, loco sheds, and C & W depots, and in breakdown vans of accident relief trains and guards (Annexure IV)

(No. 87/H/7/12 dt. 15/09/1989 and dt .02/08/1995)

(5) Special first aid boxes – provided in all long distance superfast, Shatabdi and Rajdhani trains (Annexure V)

(Bd.'s letter 85/H/7/9 dt. 30.6.95)

(6) First aid box for gangmen- (Annexure VI)

Apart from the equipment referred to above, every Railway doctor should be provided with an emergency medical bag in which he can carry the injectables, pain relieving drugs and other medicines and dressings required in emergency. If a Railway doctor happens to be on the spot of an accident, he can start relief work without waiting for the regular medical equipment to arrive.

(Para 1414 of Indian Railway Establishment Manual and Min. Of Railways letter No.69/H/2/6 dt. 16/8/71 and Rly Bd.'s letter No.87/H/7/12 dated 15/09/89)

61.3 Policy regarding provision of different types of accident Relief Medical Equipment:

(1) Accident Relief Medical Equipment Scale I in Medical vehicles forms a unit of the accident relief train and is stationed at divisional headquarters and at other selected important stations preferably where there are hospitals or health units in charge of Railway medical officers. The function of the vehicle is to carry

medical equipment to the site of accident so that prompt medical aid could be rendered and injured persons transported expeditiously to the nearest hospitals.

(2) An auxiliary van is also provided along with the medical vehicle and stabled in the same siding with both ends open. The auxiliary van should have provision for emergency tools for extricating passengers from debris and should also carry adequate supply of drinking water and provision for tea, coffee and light refreshment to be served to affected passengers.

(3) As far as possible, items of medical equipment likely to be required immediately for opening a temporary field dressing station should be kept in portable containers which should be numbered, each container having a printed card attached to it in the front giving the details of the contents.

(4) The medical vehicle should be stabled in a siding having opened at both ends. Although the responsibility of placing of medical vehicle in a suitable position for taking it out quickly at a moment's notice rests with the operating and mechanical departments, yet it is the duty of medical department also to keep an eye on the position in which medical van is stabled. If it is stabled in any manner likely to cause delay in its movement in an emergency, it should at once be brought to the notice of official in charge for necessary action.

(5) The medical portion of the accident relief train i.e. the medical vehicle should be stabled separately or so marshalled on the relief train that it can, if necessary, be despatched in advance of the rest of the rake without any delay.

(6) In despatching an accident relief train to the site of accident site, any factors likely to reduce the speed, such as the presence of a crane on the train, should be taken into account in deciding as to whether the medical vehicle should be sent in advance.

Note: All medical vehicles should be so built as there is no speed restriction when they are despatched to the site of accident. Further the train examiner should ensure that all

bearings etc. of these vehicles are in good working condition.

Portable Medical Kit for Accident (POMKA)

Contents of POMKA as per annexure II should be stored in a convenient suitcase (Size 21 inches) for easy transport by road / rail. There should be one set of POMKA in Health units & polyclinics and two sets in sub- divisional hospitals. The divisional/ zonal hospitals are required to have three sets of POMKA with some additional items as per annexure II to this chapter.

Scale II - Equipment

Accident relief medical equipment Scale II is located at selected stations where there is no accident relief train. They should be located at every 80 to 100 km. apart, and preferably where there is a Railway hospital or a health unit. Generally, there should be at least one scale II equipment stationed on either side of a scale 'I' equipment so that in case of major accidents, at least one or the other can reach and be available at the site of accidents in quick time.

The equipment which now consist of 3 sets of POMKA and additional item as per Annexure III should be in charge of the Station Manager/Dy. S.S and should be stored in portable boxes of suitable size and standard pattern as approved by the Chief Medical Director, on a raised concrete platform so that it's bottom does not touch the floor, in a separate room in or adjacent to the station building. If necessary, a room should be specially constructed for the purpose. It should have separate entry and exit one on either side, and it should be so situated as to facilitate easy loading of the boxes in train. For quick transporting, loading and unloading of the boxes containing scale II equipment, a wheelbarrow with handle should also be provided.

This equipment is intended for use in major accidents only and is to be handled by any doctor or by qualified first-aiders under the supervision of the doctors. It should not be normally utilised for minor accidents.

Special First Aid Boxes

The special first aid boxes with contents as per the list at Annexure V should be provided in all the long distance, super-fast, Shatabdi and Rajdhani Trains. The tablets and injectables provided in these boxes will be used by any qualified allopathic doctor who may be travelling in the train. Other first aid material provided, including tablet paracetamol (for Headache/Fever) can be used by a first aid trained person.

1. These boxes will be under the charge of the Train Supdt.s. in the trains, who will be responsible for getting these boxes replenished from the hospitals/health units. In the trains where train Supdt.s. are not posted/available, such boxes will be given in the charge of departmental Pantry Car Managers who, likewise, will be responsible to get them replenished from the hospitals.
2. The boxes with Trains Supdt.s./Pantry Car Managers in the above-mentioned trains will be in addition to those provided to Guards.
3. The additional boxes and items required for the purpose may be supplied from the Railway hospitals and no additional budgetary sanctions on this account will be provided. The size of these special boxes will be 46 cms in length, 30 cms in width, and 13 cms height and should be metallic one only. The requisite number of the boxes on each Railways may be assessed as per the number of rakes of such trains, keeping in mind an additional cushion for replacements/additional future provisions in more trains. CMDs on the Railways will arrange to process procurement of these boxes through the Controller of Stores.

(Railway Board's letter No. 95/H/7/9 dated 30.06.95)

61.4 First aid boxes

Static first aid boxes in breakdown vans of accident relief trains, and at stations, workshops, yards, loco sheds and carriage and wagon depots etc., should be hung in a prominent place on a wall bracket in the respective offices. These boxes should be made of metal, preferably aluminium, with the lid fitting well down over the sides as to be dust proof and should have a handle or a canvas strap arrangement for ease of carrying. The exact size and pattern of the boxes should be standardised by the Chief Medical Director.

The first aid boxes for guards of passenger carrying trains should be of the standards as fixed by the St. John Ambulance Association of India and the contents should be as detailed in Annexure IV. These boxes should be the personal equipment of the guards and should be carried by them in their guard-boxes.

The first aid box of guards of suburban trains may be compact and smaller in size. They should have canvas strap arrangement so as to be carried on the shoulder.

The equipment in first aid boxes in the workshops may differ from the standard first aid boxes to comply with the rules prescribed by the respective state Govts. under the Factories Act, in case they are different from those laid down by the Ministry of Railways.

First Aid box for gangmen shall be an aluminium or metallic box, which is not likely to be rusted. It should be sturdy. Wooden boxes wherever used may be retained till they are fit for use. Their replacement should be by aluminium boxes only.

The equipment contained in the first aid boxes is only for first aid and is to be used by those qualified in first aid. Even though no first aid box has been provided for the guards of the goods trains, the guards and drivers of such trains are expected to be trained in first aid, so that, life saving measures like stopping of haemorrhage and transport of case with fractured limbs can be undertaken at site.

(Para 1415 and 1416 of Indian Railway Establishment manual and Ministry of Railways' letters No.62/142/118/M(C) dt. 12/10/1962,No 66/M(M&P) 7/2 dt. 4/09/1967 and 27/07/1968,No.69/H/2/6 dt. 16/08/1971,dt. 3/12/1971 and dt. 22/12/1972)

FIRST AID

62

The immediate treatment given to the injured in an accident or sudden illness before the arrival of the doctor is called first aid. The aim or objective of First Aid is as under:

a. Save life.
b. Promote recovery.
c. Prevent worsening of the condition.
d. Arrange transport to shift the injured person to hospital

62.1 Types of Accident Relief Medical Equipment:

With a view to provide prompt medical aid, the following types of accident relief medical equipment's are provided on the railways:

1. **Scale-I** medical equipment (MRV) is available at nominated stations mentioned in working timetable.
2. **POMKA** (Portable Medical Kit for Accidents) available in all health units, poly clinics, sub-divisional, divisional, and zonal hospitals.
3. **Scale-II** medical equipment's (ARME) are available at

specified stations in boxesmentioned in the working timetable.

4. **First Aid boxes** are provided with Station Masters, Guards of passenger carryingtrain Guards, workshops, marshalling yards, loco sheds, and C&W depots.
5. **Special First Aid boxes** are provided in all long distance Super-fast, Shatabdi, Rajdhani expresses, Dy. SS (Commercial), AC coaches of some of nominated trains.
   This box contains 49 items and this is to be utilized for giving medical aid to the passengers by a doctor only.
6. First Aid boxes for track man.
7. First aid boxes available with Station Masters and Guards of passenger carryingtrains are to be inspected by DMO once in a month.
8. Keys of the first aid boxes for locations such as stations, marshalling yards, workshops, loco sheds, carriage, and wagon depots etc., are kept with the supervisors on duty.
9. The first aid boxes with guards of train carrying passengers will have no keys.

Contents of the First Aid box:

S. No.	Items	Quantity
1.	Set of splints	1
2.	Roller Bandage	10
3.	Triangular Bandages	4
4.	Tourniquet/Rubber Bandages	2
5.	Cotton Wool	4
6.	Safety Pins	10
7.	Adhesive Dressing	20
8.	Paracetamol Tab	20
9.	Diazepam Tab	10
10.	Antiseptic Cream	1
11.	Injury Card	1

62.2 Utilization of contents of First Aid Box:

1. **Splints**:
   These are used to immobilize and support the fractured limbs.
2. **Roller Bandages**:
   These are used to retain dressings and splints in position
3. **Triangular Bandage**:
   - To retain dressings and splints in position and to immobilize the fractures.
   - To support an injured part or in the form of slings.
   - To control bleeding.
   - To reduce or prevent swelling.
   - Mainly used as bandages like head bandage, chest bandage, shoulder bandage, elbow bandage, hand bandage, hip bandage, foot bandage etc. It is also used as slings like arm slings, triangular slings and cuff and collar sling.
4. **Tourniquet / Rubber Bandage**:
   It is used to stop bleeding and to stop the spreading of poison in case of snake bites. Itis used only for hands and legs. It is to be released at regular intervals.
5. **Cotton Wool**:
   It is used to clean/pad the wounds. It is also used to absorb discharges whenthere is a wound.
6. **Safety Pins**:
   It is used when Triangular bandages are used for the injury.
7. **Adhesive Dressing**:
   It is used for minor and superficial wounds only.
8. **Paracetamol Tab**:
   These are used to relieve minor pains.
9. **Diazepam Tab**:
   It is a anti-anxiety medication which is used to make the injured person calm in order to prevent panic
10. **Antiseptic Cream**:
    It is used to minimize or prevent infection to wounds.
11. **Injury Card**:
    It is for maintaining the account of the first aid box items.

62.3 Steps to Be Followed While Rendering Effective Help to A Person

1. D-Danger
2. R-Response
3. A-Airway
4. B-Breathing
5. C-Circulation of Blood.

1. Remove the person from the danger; shift him / her to a safe place.
2. Find out whether the person is responding or not. If he / she responds is Conscious,otherwise unconscious.
3. If unconscious check ABC, if any failure restore artificially immediately.

Airway

Airway may get blocked due to: Tongue falling back or Foreign body in the airwayTo check airway

1. Lay the casualty on his back
2. Open the mouth and see inside
3. If the tongue has fallen back, tilt the head slightly back to bring the tongue to itsnormal position and open the mouth.
4. If any foreign body is visible inside the mouth, it should be removed by insertingtwo fingers into the mouth carefully.
5. After clearing the airway, the casualty should be put in recovery position.
6. Once the air is clear, breathing starts automatically.

Breathing

1. Look for the person's chest to rise and fall.
2. Listen for the sounds of inhaled or exhaled air.
3. Feel exhaled air by putting your finger near the casualty ‘s nose.
4. If no breathing gives two inflations of artificial respiration.

Circulation

1. Feel for a pulse, by gently pressing two fingers (do not use the thumb) on the person's neck between the Adam's apple, or voice

box, and the muscle on theside of the neck.

2. If you are not feeling the pulse, it indicates that heart not functioning
3. Restore the heart through cardiac massage
4. The pulse rate is 72 times per minute on an average. While noticing the pulse,observe its rate, strength, and rhythm.

62.4 Asphyxia (Suffocation)

Definition: When lungs are not getting sufficient fresh air, important organs of the body, mainly the brain, are deprived of oxygen. This is a dangerous condition called asphyxia.

Causes:

1. Drowning
2. Breathing polluted air
3. Pressing of windpipe (Hanging, Throttling and Strangulation)
4. Choking
5. Pressure/weight on chest.
6. Electric shock
7. Some poisons.

Signs and Symptoms of Asphyxia/Suffocation:

1. Low / No Breathing
2. Blue colour of cheeks and lips with congestion of face.
3. Swelling of veins at neck.
4. Unconsciousness.

General Treatment for Asphyxia:

1. Remove cause from casualty or casualty from cause.
2. Ensure more fresh air; loosen tight clothing at chest and neck regions.
3. Start artificial respiration without wasting time.
4. Arrange medical aid.

Note: -

1. Normal Breathing (Respiration) Rate 15 – 18 times per minute.
2. Normal Heartbeat/pulse rate 72 times per minute.

Methods of Artificial Respiration:

A. Mouth to Mouth Method of Artificial Respiration

B. Mouth to Nose Method of Artificial Respiration

A. Mouth to Mouth Method of Artificial Respiration:

1. Place the casualty on his back on a plain and hard surface.
2. Sit by the side of the face and place the hand by the side of chin and tilt the head slightly back so that clear ventilation at throat.
3. Cover the casualty ‘s mouth with clean cloth and pinch the nostrils.
4. Open your mouth, take fresh air, and cover the lips of the casualty with your lips and blow the air into the mouth of casualty @ 10-12 times per minute.
5. While blowing ensure that nostrils are pinched, and chest is rising. If chest is not raising it indicates some obstruction in air passage clear the air passage and restart mouth to mouth artificial respiration. This process to be continued till the normal breathing resumed or Doctor arrives whichever is earlier.

B. Mouth to Nose method of Artificial Respiration:

This method will be adopted only when the mouth cannot be opened due to injury inside the mouth or jaw fracture or the person suffering with fit convulsions. In this method blow the air into the nose of the victim by closing the mouth of the victim with fingers.

62.5 When the Heart Stops Functioning

If the Heart is not working the following symptoms are noticed:

1. The face is blue or pale.
2. Heartbeat and pulse at the root of Neck (carotid pulse) are not felt.

Note:-

1. Even if the casualty is breathing but the breathing is not normal, it is wise to startartificial respiration.
2. Do not begin heart compression until you are sure that the heart has stoppedbeating.

External Heart Compression or External Cardiac Massage:

1. Place the casualty flat on his back on a hard surface and remove the cloths overthe chest.

2. Sit on the right side of the casualty
3. Feel and mark the lower part of the sternum.
4. Place the heel of your left hand on the marked point make sure that the palm andfingers are not in contact with chest.
5. Place the heel of the right hand over the left hand.
6. Push the sternum towards the spine. It can be pressed upto 1 to 1.5 inches.
7. Adults should be given about 100 compressions per minute. For children from 2 to 10 years compressions with one hand heel will be enough, but compressions should be @ 100 times per minute. For infants under 2 years a compression with two fingers is good enough and applied at a rate of 100 times per minute.
8. Press firmly but carefully, carelessness may cause injury to ribs.
If the treatment is effective

1. colour will become normal.
2. Pupil will contract.
3. Carotid pulse begins.

CPR (Cardiopulmonary Resuscitation)

If heart and breathing both have failed give CPR - Cardiopulmonary Resuscitation: Give 30 heart compressions of cardiac massage, then two inflations of artificial respirations and repeat the process.

62.6 Shock

Definition: Shock is severe depression to vital functions of organs like brain, heart, lungs etc. dueto less blood supply to the brain.

Causes:

1. Wounds
2. Fractures
3. Burns & Scalds
4. Snake bite
5. Sunstroke
6. Heart attack
7. Dog bite

8. Electrical shock etc.

Sign and symptoms of Shock:

1. Giddiness
2. Pale colour of face
3. Coldness
4. Cold clammy skin
5. Rapid and weak pulse
6. Nausea
7. Vomiting
8. Unconsciousness

General Treatment for Shock:

1. Reassure (encourage) the casualty if he is conscious.

2. Keep the casualty in supine position (face upward) with head lower than the body to supply more blood to brain. The head must be turned to one side to avoid tongue falling back and blocking the windpipe.

3. Cover with a blanket to keep the victim warm. Do not use hot water bottles, massage or give alcoholic drinks.

4. Give pain relievers and arrest bleeding, if necessary.

5. Arrange medical aid.

62.7 Wounds And Hemorrhages (Bleedings)

Definition: Wound is caused due to breakage of skin / tissue.

Types of Wounds:

1. Contused Wounds
2. Lacerated Wounds
3. Punctured Wounds
4. Incised Wounds.

1. Contused wounds are caused by blunt instruments where there is no opening. It is treated by putting ice over the wound.

2. Lacerated wounds are caused by irregular edges of instruments like glass pieces, metal pieces, machine injuries, animal bites and are said to occur where the edges of the wound are irregular. Clean the wound with water and pick any floating foreign body. Cover the wound with a clean cloth or apply antiseptic cream.

3. Incised wounds are caused by sharp edged instruments like razor / knife where the edge of wound is in a straight line. Arrest the bleeding immediately if loss of blood isprofuse.

4. Punctured wounds are caused by sharp edged/pointed instruments like needles, nails and gun-shot wounds where the wound is deeper than wide. The wound should be covered and packed with a pad.

Types of Bleedings (Hemorrhages):

1. Artery Bleeding – Bright red in colour and flow in jets.

2. Vein Bleedings – Dark red in colour and flow continuously.

3. Capillary Bleedings – Red in colour and oozing from all parts of wound.

According to the place of wound bleeding are two types:

1. External bleeding

2. Internal bleeding

Danger of Wounds:

1. It allows precious blood to escape from the body.

2. It permits harmful bacteria/virus or other injurious agents to enter into the body.

Methods to arrest Bleeding:

1. Direct Pressure Method: Whenever a person has a bleeding wound which is free from any foreign body, direct pressure method is to be used for arresting the bleeding. Clean the surroundings of the wound. Put a dressing/pad and press the wound. Bleeding will cause.

2. Indirect Pressure Method: It is applied by two ways :-

1. By using Tourniquet bandage,

2. By pressing Pressure Points

A Tourniquet bandage is used to stop bleeding for hands and legs only. It should be tied above the wound towards the heart in a single bone area, and should be relaxed once in 15 minutes.

3. Important Pressure Points:

For other parts pressure points to be pressed-

1. Carotid pressure points to the neck on either side of the voice box. Sub-clavian pressure point on the inner end of collar bone.

2. Bronchial pressure points on the inner side of upper arm.

3. Femoral pressure points on the thigh bone.

General Treatment (First Aid) to Wounds:

1. Place the victim in sitting/lying position and elevate the injured part if possible.
2. Expose the wound and clean the wound and surrounding area but do not disturbblood clot if already there.
3. Remove any foreign bodies which are floating.
4. Arrest bleeding by applying pressure directly on the wound by putting a pad or bythe indirect method as the situation demands.
5. Apply antiseptic cream, dressing and bandage.
6. Immobilize the part where possible.
7. Give pain relievers and treat for shock.
8. Arrange medical aid.

Nose bleeding Treatment (Hemorrhage):

1. Advise the victim to breathe through the mouth.
2. Place the victim near a window or against a current of air in the sitting positionwith the head slightly bent forward.
3. Pinch the junction of the nose just below the hard part.
4. If available put an ice piece over the nose or a wet cloth.
5. Warn him not to blow the nose.
6. Do not block the nostrils.
7. Arrange medical aid.

Ear bleeding Treatment:

1. Place the victim on his back.
2. Do not block the ear passages
3. If one ear is bleeding turn the head to the same side from which blood is comingout, and see that the affected ear is down.
4. If both ears are bleeding, keep face upward and head little bit low for free? Drainage of blood and raise the legs.
5. Do not block the ear.
6. Arrange medical aid.

Internal Bleeding:

a) **Symptoms of internal bleeding:**

1. Giddiness.
2. My skin becomes pale, cold and clammy.
3. Pulse gets rapid but very weak.
4. Sweating, thirsty, feels vomiting sensation.
5. Becomes unconscious.

b) **Treatment for internal bleeding:**

1. If the person is unconscious, check the airway, breathing and circulation of blood. Ifany failure is noticed, restore them.
2. Lay him on his back and raise the legs by using pillow to enable the blood supplyto reach the brain.
3. If he is conscious lay him on his back and raise the legs by using pillow to enablethe blood supply to the brain.
4. Shift him to hospital as early as possible.

62.8 Head Injury:

As a result of head injury, blood and brain fluid may flow out of the nose, ear ormouth.

a) **Symptoms**:

1. Giddiness.
2. My skin becomes pale, cold and clammy.
3. Pulse gets rapid but very weak.
4. Sweating, thirsty, feels vomiting sensation.
5. Become unconscious.

b) **Treatment**:

1. Ask the person not to blow his nose.
2. Do not pack your ear or nose.
3. Lay the person on the affected side.
4. Ensure tongue does not fall back.
5. If any ear bleeding is noticed, do not block the ear passage.

62.9 Burns and Scalds

Definition: Burn is an injury caused by-

1. Dry heat – such as fire / flame

2. Friction – touching speedy moving objects
3. Corrosive (burning nature) chemicals like acids / alkalis
4. Touching an object which was charged with high tension electric current.

Scald is an injury caused by moist heat such as hot water, milk, oil, tar, steam etc.

Degrees of burns:

1st degree	Redness of skin, blister
formation2nd degree	Internal tissue damage
3rd degree	Complete charring of part.

General treatment for burns and scalds:

1. If a person‘s cloth catches fire do not allow him to run. Pour plenty of water or gently place him on the ground and roll him slowly to put on the flames.
2. Cool and clean the affected area with wet cloth / cotton or flood with water or dipthe affected area into water, if it is possible.
3. Remove bangles, rings, watches immediately, as otherwise it may not be possibleto remove them later.
4. Remove the burnt cloths by cutting those not sticking to the skin.
5. Cover the area preferably with clean cloth but do not disturb blisters.
6. Do not apply antiseptic cream for major burns
7. If he is conscious give water with pinch of salt to make good lost salt and water.Weak tea with more sugar also may be given if he is not a diabetic patient.

62.10 Fracture, Dislocation, Sprain and CrampDefinitions:

1. Fracture is breakage, crack / bend of a bone.
2. Dislocation is displacement of one or more bones from joint.
3. Sprain is wrenching tearing of cartilage near a movable joint.
4. Strain is overlapping of muscles at a particular place.
5. Cramp is sudden painful involuntary contraction of voluntary muscles.

Causes of Fractures:

Direct force, indirect force and muscular contraction

Signs and Symptoms for Identification of Fracture:

1. Pain
2. Swelling
3. Loss of power
4. Deformity (change in shape or size).
5. Tenderness (sever pain by gentle touch)

Types of Fractures:

1. Simple Fracture means the broken ends of the bone do not come out by openingthe skin and thus remain inside only.
2. Compound Fracture means the broken ends of the bone come out by opening theskin and the fractured bone is in contact with outside air as a result of an injury.
3. Complicated Fracture means the fractured bone damages an important internal organ like the brain, a major blood vessel, the spinal cord, lungs, lever, spleen etc.

General Treatment for Fractures:

1. Immobilize and support the affected part/limb by means of Splints, Bandages/Slings etc.
2. It is important to immobilize the area both above and below the injured bone.
3. Give pain relievers and treat for shock, if necessary.
4. Ice packs can be applied to reduce pain and swelling (not to be placed directlyover the wound.
5. Arrange medical aid as early as possible.

Sprain and Strain Treatment:

1. Place in suitable position and put firm bandage and in case of strain wet it with water frequently.
2. Arrange medical aid.

62.11 Poisons

Definition:

1. Any substance (liquid, solid or gas) which enters into the body in sufficient quantity, and which is harmful to the body and has

power to injure health or destroy life is called poison.

a) Gaseous Poisons:

1. These into the body through breathing.

2. Treatment:

3. Take the person to a safe place and start artificial respiration, if necessary. Before entering into room, ensure proper ventilation and the First Aider should take the precaution of covering his face with wet cloth. Shift the victim to the hospital as earlyas possible.

b) Swallowed Poisons:

1. These into the body through mouth

2. Treatment**:**

1. Act quickly and collect poison or container and send messenger for Doctor. Before the Doctor arrives, check whether he is conscious or not. If unconscious, check the air way, breathing and circulation. If there is no breathing, start artificial respiration and if there is no pulse start CPR.

2. If conscious, dilute the poison by making him drink more water, milk, tender coconut, white portion of the raw egg.

3. If the poison is corrosive in nature, do not induce vomiting.

4. Neutralize the poison by giving antidotes. For acids – chalk powder mixed in water and for alkalis – lemon juice.

5. If the poison is noncorrosive such as pesticides, excess dose of sleeping pills, mosquito killers, rat killers etc. induce the person to vomit by tickling or by giving large quantity of concentrated salt water.

62.12 Snake / Dog / Scorpion Bite Treatment

a) Snake bite:

1. Tie rubber (Constriction) bandage (if the bite took place on legs / hands) abovethe wound towards the heart side. This must be released at regular intervals.

2. Wash the area immediately with a flow of water.

3. Reassure the victim and try to allay his fear.

4. Don‘t allows him to run or walk.

5. Treat the wound.

6. Treat for shock.
7. Give artificial respiration if there are any signs of failure of breathing.
8. Arrange medical aid or take the person to the doctor.

b) Dog bite:

1. Wash the bitten area with soap water and with antiseptic solution.
2. Encourage bleeding and do not cover the wound.
3. Collect information about dog and dog bite whether as it is pet / stray dog; andwhether it is a provoking / non provoking bite.
4. Arrange medical aid.

c) Scorpion bite:

1. Wash the bitten area.
2. Apply sodium bi-carbonate or potassium permanganate and sodium bi-carbonatemixture on the bitten area.
3. Arrange medical aid.

d) Drowning:

1. Remove the person from the water.
2. Lay him on the ground on his stomach and turn the head to one side.
3. Apply pressure on the back (waist portion) or raise the belly so that the water inthe lungs comes out.
4. Once lungs are vacated, breathing will start. If it has not started, give artificialrespiration to restart the breathing.
5. Arrange medical aid.

62.13 Unconsciousness (Insensibility)

1. When sensory organs are not in working condition except in sleep, the condition iscalled unconsciousness. Unconsciousness is due to interruption of the brain action through some interference in the functioning of the nervous system.
It is of two types (1) Stupor (partial) (2) Coma (complete)

Treatment:

1. Ensure an abundant supply of fresh air.
2. If breathing stops or appears to be failing, start artificial

respiration.

3. If breathing is not noisy, keep your face upward and head and shoulders raisedslightly.
4. If breathing is noisy keep in recovery position.
5. Undo all tight clothing, especially around neck and chest.
6. Apply the specific treatment for the cause.
7. Wrap the victim in a blanket.
8. Do not leave the casualty alone.
9. Do not attempt to give food / fluids while unconscious through mouth.
10. Shift him to hospital.

62.14 Epilepsy (Fits)

Signs and Symptoms:

1. Suddenly loses consciousness.
2. Sometimes remain rigid with flush face.
3. Convulsions start with froth at mouth.
4. Pulse will be in bouncing condition.
5. My body becomes stiff.

Treatment:

1. Do not stop convulsions by force.
2. Try to remove hard articles away from the victim.
3. Wipe away the froth from his mouth.
4. Keep careful watch for a possible failure of breathing and heart.
5. Wait till he comes to a normal condition.
6. Protect the tongue by placing soft material between the teeth.
7. Once he becomes normal, advice the casualty to see the doctor.
8. Do not keep any metal in your hands and do not pour water.

PART VI:
राजभाषा
RAJBHASHA

राजभाषा संबंधी संविधानिक
उपबंध तथा विधिक उपबंध

63

संघ की राजभाषा नीति : भारत का संविधान

भाग 5

अनुच्छेद 120: संसद में प्रयुक्त होने वाली भाषा

भाग 6

अनुच्छेद 210: विधानमंडल में प्रयुक्त होने वाली भाषा

भाग 17

अनुच्छेद 343: संघ की राजभाषा-

1) संघ की राजभाषा हिंदी और देवनागरी होगी। संघ के शासकीय प्रयोजनों के लिए प्रयोग होने वाले अंकों का रूप भारतीय अंकों का अंतरराष्ट्रीय रूप होगा।
2) संविधान लागू होने से (26 जनवरी 1950) 15 वर्ष और 26 जनवरी 1965 तक अंग्रेजी भाषा सरकारी कार्यों में पूर्ववत चलती रहेगी।
3) संसद 26 जनवरी 1965 अर्थात 15 साल के बाद भी अंग्रेजी भाषा या देवनागरी अंकों के प्रयोग को विधि द्वारा विनिर्दिष्ट प्रयोजनों में जारी रख सकेगी।

अनुच्छेद 344: राजभाषा के लिए आयोग और संसद की समिति

अनुच्छेद 345: राज्य की राजभाषा या राजभाषाएं

अनुच्छेद 346: एक राज्य और दूसरे के बीच में अथवा राज्य और संघ के बीच में संचार के लिए राजभाषा

अनुच्छेद 343: किसी राज्य के जनसमुदाय के किसी भाग द्वारा बोले जाने वाली भाषा के संबंध में विशेष उपबंध।

अनुच्छेद 348: उच्चतम न्यायालय और उच्च न्यायालयों में तथा अधिनियम विधेयक आदि में प्रयोग की जाने वाली भाषा।

अनुच्छेद 349: भाषा संबंधी कुछ विधियों को नियमित करने के लिए विशेष प्रक्रिया।

अनुच्छेद 350: किसी व्यथा के निवारण के लिए संघ या राज्य के किसी पदाधिकारी या प्राधिकारी को यथास्थिति संघ में या राज्य में प्रयोग होने वाली किसी भाषा में अभ्यावेदन देने का प्रत्येक को हक होगा।

अनुच्छेद 351: हिंदी भाषा में के विकास के लिए निदेश - संघ का यह कर्तव्य होगा कि वह हिंदी भाषा का प्रसार बढ़ाएं उसका विकास करें ताकि वह भारत की सामसिक संस्कृति के सभी तत्वों की अभिव्यक्ति का माध्यम बन सके और उसकी प्रकृति में हस्तक्षेप किए बिना हिंदुस्तानी के और आठवीं अनुसूची में विनिर्दिष्ट भारत की अन्य भाषाओं के प्रयुक्त रूप शैली और पदों को आत्मसात करते हुए और जहां आवश्यक या वांछनीय हो वहां उसके शब्द भंडार के लिए मुख्यता संस्कृत से और गौणतः अन्य भाषाओं से शब्द ग्रहण करते हुए उसकी समृद्धि सुनिश्चित करें।

संविधान की आठवीं अनुसूची में सम्मिलित भाषाएं:

1) असमिया	2) उड़िया	3) उर्दू	4) कन्नड़
5) कश्मीरी	6) गुजराती	7) तमिल	8) तेलुगू
9) पंजाबी	10) बांग्ला	11) मराठी	12) मलयालम
13) संस्कृत	14) सिंधी	15) हिंदी	16) मणिपुरी
17) नेपाली	18) कोंकणी	19) मैथिली	20) बोडो
21) संथाली		22) डोगरी	

सामान्य - संघ की राजभाषा देवनागरी लिपि में हिंदी है। परंतु हिंदी के अतिरिक्त अंग्रेजी भाषा का प्रयोग भी सरकारी कामकाज में किया जा सकता है। (संविधान अनुच्छेद 343(1) तथा राजभाषा अधिनियम की धारा 3)

1.1 संसद में प्रयुक्त होने वाली भाषा:

संविधान के अनुच्छेद 348 के उपबंधों के अधीन रहते हुए संसद में कार्य हिंदी में या अंग्रेजी में किया जा सकता है। परंतु राज्यसभा का सभापति या लोकसभा का अध्यक्ष अथवा ऐसे रूप में कार्य करने वाला व्यक्ति सदन के किसी सदस्य को अपनी मातृभाषा में सदन को संबोधित करने की अनुमति दे सकता है।

1.2 किन प्रयोजनों के लिए केवल हिंदी का प्रयोग किया जाना है किनके लिए हिंदी और अंग्रेजी दोनों भाषाओं का प्रयोग आवश्यक है किनके लिए अंग्रेजी भाषा का प्रयोग किया जाना है और किन कार्यों के लिए हिंदी या अंग्रेजी दोनों भाषाओं का प्रयोग किया जा सकता है यह राजभाषा नियम 1963 राजभाषा नियम 1976 और उनके अंतर्गत समय-समय पर राजभाषा विभाग गृह मंत्रालय की ओर से जारी किए गए निर्देशों द्वारा निर्धारित किया गया है।

1.3 राज्य आदि और केंद्रीय सरकार के कार्यालयों को छोड़कर दूसरे कार्यालयों या व्यक्तियों से पत्र व्यवहार:

> केंद्रीय सरकार के कार्यालय से क्षेत्र में किसी राज्य या संघ राज्य क्षेत्र के कार्यालय को या ऐसे राज्य या संघ राज्य क्षेत्र में केंद्रीय सरकार के कार्यालय को छोड़कर किसी अन्य कार्यालय या व्यक्ति को पत्र आदि असाधारण दशाओं को छोड़कर हिंदी में भेजे जाएं यदि उनमें से किसी को कोई पत्र आदि अंग्रेजी में भेजा जाता है तो उसके साथ उसका हिंदी अनुवाद भी भेजा जाए। राजभाषा नियम 3(1)

1.4 केंद्रीय सरकार के कार्यालय से क्षेत्र ख में किसी राज्य या संघ राज्य क्षेत्र के कार्यालय को या ऐसे राज्य या संघ राज्य क्षेत्र में स्थित केंद्रीय सरकार के कार्यालय को छोड़कर किसी अन्य कार्यालय को या व्यक्ति को पत्र आदि सामान्यतया हिंदी में भेजे जाएं। यदि उनमें से किसी को पत्र आदि अंग्रेजी में भेजे जाते हैं तो उनके साथ उनका हिंदी अनुवाद भी भेजा जाए।

राजभाषा नियम 3(2)

1.5 केंद्रीय सरकार के कार्यालय से क्षेत्र ग में किसी राज्य या संघ राज्य क्षेत्र को या ऐसे राज्य में केंद्रीय सरकार के कार्यालय को छोड़कर किसी अन्य कार्यालय या व्यक्ति को पत्र आदि अंग्रेजी में भेजे जाएं। नियम 3(3)

1.6 क्षेत्र ग में केंद्रीय सरकार के कार्यालय से क्षेत्र क या ख में स्थित किसी राज्य या संघ राज्य क्षेत्र के कार्यालय को या केंद्रीय सरकार कार्यालय के क्षेत्र को छोड़कर ऐसे राज्य में स्थित अन्य कार्यालय या व्यक्ति को पत्र आदि हिंदी या अंग्रेजी में भेजे जा सकते हैं। राजभाषा विभाग द्वारा

प्रतिवर्ष वार्षिक कार्यक्रम में निर्धारित किया जाता है कि पत्र आदि में हिंदी का प्रयोग किस अनुपात से किया जाए। नियम 3(4)

1.7 केंद्रीय सरकार के कार्यालयों के बीच पत्र व्यवहार केंद्रीय सरकार के किसी एक मंत्रालय या विभाग और दूसरे मंत्रालय विभाग के बीच पत्रादि हिंदी या अंग्रेजी में हो सकते हैं।
नियम 4(क)

1.8 केंद्रीय सरकार के एक मंत्रालय या विभाग और क्षेत्र क में स्थित संबंध या अधीनस्थ कार्यालयों के बीच पत्र आदि हिंदी में या उस अनुपात से भेजे जाने हैं जो राजभाषा विभाग प्रत्येक वर्ष वार्षिक कार्यक्रम में निर्धारित करता है। नियम 4(ख)

1.9 केंद्रीय सरकार के मंत्रालय या विभाग को छोड़कर क्षेत्र क में स्थित केंद्रीय सरकार के कार्यालयों के बीच पत्र आदि हिंदी में भेजे जाएं। (नियम 4 (ग))

1.10 क्षेत्र ख और क्षेत्र ग में स्थित कार्यालयों को आपस में और क्षेत्र क में स्थित केंद्रीय सरकार के कार्यालयों के साथ पत्र व्यवहार हिंदी या अंग्रेजी में हो सकता है। यह पत्र व्यवहार किस अनुपात में किया जाए यह राजभाषा विभाग द्वारा हर वर्ष जारी किए गए वार्षिक कार्यक्रम में निर्धारित किया जाता है। नियम 4 (घ)(ड़)

1.11 क्षेत्र क या क्षेत्र ख में स्थित केंद्रीय सरकार के कार्यालय को संबोधित पत्र आदि का दूसरी भाषा में अनुवाद भेजने की आवश्यकता नहीं। इसका दूसरी भाषा में अनुवाद पत्र आदि प्राप्त करने के के स्थान पर किया जाएगा। (नियम 4 का परंतुक 1)

1.12 क्षेत्र ग में स्थित केंद्रीय सरकार के किसी कार्यालय को यदि कोई पत्र हिंदी में भेजा जाता है और क्षेत्र ग में स्थित यह कार्यालय राजभाषा नियम 10(4) के अधीन अनुसूचित है तब उसे अंग्रेजी में अनुवाद भेजने की आवश्यकता नहीं है। क्षेत्र ग में स्थित केंद्रीय सरकार के दूसरे कार्यालयों को यदि पत्र हिंदी में भेजा जाता है तो उसका अंग्रेजी भाषा में अनुवाद उसके साथ भेजा जाए। (नियम 4 परंतुक 2)

1.13 हिंदी में प्राप्त पत्र आदि का उत्तर

हिंदी में पत्र आदि का उत्तर चाहे वह किसी भी क्षेत्र से प्राप्त हो और किसी भी राज्य सरकार, व्यक्ति या केंद्रीय सरकार के कार्यालयों से प्राप्त हो, केंद्रीय सरकार के कार्यालय से हिंदी में दिया जाए। (नियम 5)

1.14 आवेदन, अभ्यावेदन आदि का उत्तर

कोई कर्मचारी आवेदन, अपील या अभ्यावेदन हिंदी या अंग्रेजी में कर सकता है। यदि कोई

कर्मचारी अपना आवेदन, अपील या अभ्यावेदन हिंदी में करता है या उस पर हिंदी में हस्ताक्षर करता है तो उसका उत्तर हिंदी में दिया जाए। (नियम 7 (1,2))

1.15 सेवा संबंधी आदेश या सूचना

यदि कोई कर्मचारी यह चाहता है की सेवा संबंधी विषयों (जिसके अंतर्गत अनुशासनिक कार्यवाही भी है) से संबंधित कोई आदेश या सूचना जिसको कर्मचारी पर तामील किया जाना अपेक्षित है, हिंदी या अंग्रेजी में होना चाहिए तो वह उसे किसी विलंब के बिना उसी भाषा में दिया जाए। नियम 7 (3)

1.16 दस्तावेज आदि जो द्विभाषी होने चाहिए

निम्नलिखित दस्तावेज आदि हिंदी और अंग्रेजी दोनों भाषाओं में जारी किए जाएं-

1) संकल्प, साधारण आदेश, नियम अधिसूचनाएं, प्रशासनिक या अन्य प्रतिवेदन या प्रेस विज्ञप्ति।

2) संसद के किसी सदन या सदनों के समक्ष रखे गए प्रशासनिक तथा अन्य प्रतिवेदन और राजकीय कागज पत्र।

3) संविदाओं और करारों का निष्पादन लाइसेंस, परमिट और टेंडर के लिए नोटिस और प्रारूप। (अधिनियम की धारा 3(3))

1.17 मैनुअल, संहिताएँ, प्रक्रिया संबंधी अन्य साहित्य लेखन सामग्री आदि

क) सभी मैनुअल, **संहिता** और प्रक्रिया संबंधी अन्य साहित्य हिंदी और अंग्रेजी में द्विभाषी रूप में मुद्रित या साइक्लोस्टाइल किया जाए और प्रकाशित किया जाए।

ख) केंद्रीय सरकार के किसी कार्यालय में प्रयोग किए जाने वाले रजिस्टर के प्ररूप और शीर्षक हिंदी और अंग्रेजी दोनों भाषाओं में हो।

ग) केंद्रीय सरकार के किसी कार्यालय में प्रयोग के लिए सभी नाम पट्ट, सूचना पट्ट, पत्र शीर्ष और लिफाफे पर उत्कीर्ण लेख तथा लेखन सामग्री की अन्य मदें हिंदी और अंग्रेजी दोनों भाषाओं में लिखी जाए व मुद्रित या उतकीर्ण जाएं।

यदि केंद्रीय सरकार ऐसा करना आवश्यक समझती है तो वह साधारण या विशेष आदेश द्वारा केंद्रीय सरकार के किसी कार्यालय को इस नियम के सभी या किन्हीं उपबंधों से छूट दे सकती है। (नियम 11)

इस परंतुक के अधीन छूट के लिए कोई प्रस्ताव उसका पूरा औचित्य दिखाते हुए राजभाषा विभाग को भेजा जाए।

1.18 क) कार्य साधक ज्ञान

यह समझा जायेगा कि किसी कर्मचारी को हिंदी का कार्य साधक ज्ञान प्राप्त है, यदि उसने -

1) मैट्रिक परीक्षा या उसके समतुल्य या ऊंची परीक्षा हिंदी विषय के साथ उत्तीर्ण कर ली है, या

2) केंद्रीय सरकार के हिंदी शिक्षण योजना के अंतर्गत आयोजित प्राज्ञ परीक्षा उत्तीर्ण कर ली है या यदि केंद्रीय सरकार द्वारा किसी विशिष्ट पदों के संबंध में उस योजना के अंतर्गत कोई निम्नतर परीक्षा विनिर्दिष्ट है तो वह परीक्षा उत्तीर्ण कर ली है, या

3) केंद्रीय सरकार द्वारा इस बारे में विनिर्दिष्ट कोई अन्य परीक्षा उत्तीर्ण कर ली है, या

4) वह राजभाषा नियम के संलग्न प्ररूप में यह घोषणा करता है कि उसने हिंदी का कार्य साधक ज्ञान प्राप्त कर लिया है। (नियम 10)

1.18 ख) प्रवीणता

किसी कर्मचारी के बारे में यह समझा जायेगा कि उसने हिंदी में प्रवीणता प्राप्त कर ली है, यदि उसने

1) मैट्रिक परीक्षा या उसके समतुल्य या उससे ऊंची कोई परीक्षा हिंदी के माध्यम से उत्तीर्ण कर ली है, या

2) स्नातक परीक्षा में अथवा स्नातक परीक्षा के बराबर या उससे ऊंची किसी परीक्षा में हिंदी को एक वैकल्पिक विषय के रूप में लिया है, या

3) वह राजभाषा नियम में संलग्न प्ररूप में यह घोषणा करता है कि उसे हिंदी में प्रवीणता प्राप्त है। (नियम 9)

1.18 (ग) केंद्रीय सरकार के कार्यालयों में टिप्पण आदि

केंद्रीय सरकार ऐसे कार्यालयों को जिन में कार्य करने वाले कर्मचारियों में से 80% ने हिंदी का कार्यसाधक ज्ञान प्राप्त कर लिया है और जो राजभाषा नियम 10(4) के अधीन अधिसूचित किए जा चुके हैं, विनिर्दिष्ट कर सकती है कि उनमें ऐसे कर्मचारियों द्वारा जिन्हें हिंदी में प्रवीणता प्राप्त है टिप्पण, प्रारूपण और ऐसे अन्य शासकीय प्रयोजनों के लिए, जो आदेश में विनिर्दिष्ट किए जाएं केवल हिंदी का प्रयोग किया जाएगा। (नियम 8(4), 10(2) और 10(4))

1.19 उपर्युक्त को छोड़कर कोई कर्मचारी किसी फाइल पर टिप्पणी या कार्यवृत्त हिंदी या अंग्रेजी में लिख सकता है और उससे यह अपेक्षा नहीं की जाएगी कि वह उसका अनुवाद दूसरी भाषा में प्रस्तुत करें। नियम 8(1)

1.20 कर्मचारी द्वारा अंग्रेजी अनुवाद की मांग

केंद्रीय सरकार का कोई भी कर्मचारी, जो हिंदी का कार्यसाधक ज्ञान रखता है हिंदी में किसी दस्तावेज के अंग्रेजी अनुवाद की मांग तभी कर सकता है जब वह दस्तावेज विधिक या तकनीकी प्रकृति के हो, अन्यथा नहीं। यदि यह प्रश्न उठता है कि कोई दस्तावेज विधिक या तकनीकी प्रकृति का है या नहीं तो विभाग या कार्यालय का प्रधान उसका निर्णय करेगा।

(नियम 8(2) और (3))

1.21 अनुपालन का उत्तरदायित्व

पैरा 1.16 में दिए गए दस्तावेजों पर हस्ताक्षर करने वाले व्यक्ति का यह उत्तरदायित्व है कि वह यह सुनिश्चित कर ले कि दस्तावेज हिंदी और अंग्रेजी दोनों में ही तैयार किए जाते हैं, निष्पादित किए जाते हैं और जारी किए जाते हैं। (नियम 6)

1.22 केंद्रीय सरकार के प्रत्येक कार्यालय के प्रशासनिक प्रधान का यह उत्तरदायित्व है कि वह यह सुनिश्चित करें कि राजभाषा अधिनियम और राजभाषा नियम के उपबंधों का समुचित रूप से अनुपालन हो रहा है और इस प्रयोजन के लिए उपयुक्त और प्रभावकारी जांच के उपाय करें।

(नियम 12(1))

1.23 केंद्रीय सरकार (राजभाषा विभाग) द्वारा राजभाषा अधिनियम और राजभाषा नियम के उपबंधों के पूरी तरह अनुपालन के लिए अपने कर्मचारियों और कार्यालयों को समय-समय पर आवश्यक निर्देश जारी किए जाते हैं। कार्यालय के प्रशासनिक प्रधान का यह भी उत्तरदायित्व है कि वह इन निर्देशों का पालन सुनिश्चित करें। (नियम 12(1) व (2))

1.24 अंक

संघ के शासकीय प्रयोजनों के लिए भारतीय अंकों का अंतर्राष्ट्रीय रूप (1,2,3,4,5,6,7,8,9,0) प्रयोग में लाया जाए। (संविधान का अनुछेद 343(1))

1.25 राष्ट्रपति, संघ के शासकीय प्रयोजनों में से किसी प्रयोजन के लिए भारतीय अंकों के अंतरराष्ट्रीय रूप के अतिरिक्त देवनागरी रूप का प्रयोग प्राधिकृत कर सकते हैं। इसके अधीन राज्यों के राज्यपालों, उच्चतम न्यायालय के न्यायाधीशों और उच्च न्यायालयों के न्यायाधीशों की नियुक्ति के अधिपत्रों के लिए भारतीय अंकों के अंतराष्ट्रीय स्वरूप के अतिरिक्त अंको के देवनागरी स्वरूप का प्रयोग करने की अनुमति दी गई है। (संविधान का अनुछेद 343(2))

1.26 उपर्युक्त पैरा 1.25 को छोड़कर केंद्रीय सरकार के कामकाज में जहां कहीं भी अंको का प्रयोग करना हो वहां केवल भारतीय अंकों के अंतर्राष्ट्रीय रूप का ही प्रयोग किया जाए।

1.27 संसद के कार्य

संसद में कार्य के लिए हिंदी या अंग्रेजी कोई भी भाषा प्रयोग में लाई जा सकती है।

(संविधान अनुच्छेद 120 और अधिनियम 3 (1 ख)

1.28(1) संसद के किसी सदन या सदनों के समक्ष रखे गए प्रशासनिक तथा अन्य प्रतिवेदन और राजकीय कागज पत्र हिंदी और अंग्रेजी दोनों भाषाओं में होने अनिवार्य हैं।

(अधिनियम 3(3)2)

2) उपर्युक्त प्रावधान के अंतर्गत मंत्रियों द्वारा लिखित वक्तव्य जैसे कि ध्यानाकर्षण प्रस्ताव के उत्तर में स्थगन प्रस्ताव के उत्तर में, अपने आप दिए जाने वाले वक्तव्य आदि सदन में द्विभाषी रूप में ही परिचालित किए जाएं।

1.29 विधेयक अधिनियम आदि का प्राधिकृत पाठ

1) संसद के प्रत्येक सदन या किसी राज्य विधानमंडल के सदन या प्रत्येक सदन में पुनः स्थापित किए जाने वाले किसी विधेयक या प्रस्तावित किए जाने वाले किसी संशोधन का,

2) संसद या किसी राज्य के विधान मंडल द्वारा पारित किसी अधिनियम और राष्ट्रपति या किसी राज्यपाल द्वारा प्रख्यापित किसी अध्यादेश का, और

3) संविधान के अधीन अथवा संसद या किसी राज्य के विधान मंडल द्वारा बनाई गई किसी विधि के अधीन जारी किए गए किसी आदेश, नियम विनियम और उपविधि का प्राधिकृत पाठ अंग्रेजी भाषा में माना जाता है। (संविधान अनुच्छेद 348(1 ख))

1.30 केंद्रीय अधिनियम आदि का प्राधिकृत हिंदी पाठ

शासकीय राजपत्र में राष्ट्रपति के प्राधिकार से प्रकाशित प्राधिकृत पाठ-

(क) किसी केंद्रीय अधिनियम का या राष्ट्रपति द्वारा प्रख्यापित किसी अध्यादेश का, अथवा

(ख) संविधान के अधीन या किसी के केंद्रीय अधिनियम के अधीन निकाले गए किसी आदेश, नियम, विनियम या किसी उपविधि का शासकीय राजपत्र में राष्ट्रपति के प्राधिकार से प्रकाशित हिंदी में अनुवाद, उसका हिंदी में प्राधिकृत पाठ माना जाता है।

(अधिनियम धारा 5(1))

ग) संसद के किसी भी सदन में पुनः स्थापित किए जाने वाले विधेयकों, संशोधनों के अंग्रेजी भाषा में प्राधिकृत पाठ का हिंदी में अनुवाद सरकारी विधेयक या किसी विधेयक के संबंध में सरकार द्वारा प्रस्तावित संशोधन होने पर संबंधित मंत्री द्वारा और प्राइवेट

सदस्य के विधेयक या प्राइवेट सदस्य द्वारा प्रस्तावित संशोधन होने पर राज्यसभा/लोकसभा के सचिवालय के प्राधिकृत अधिकारी के हस्ताक्षर से प्राधिकृत किया जाता है। (अधिनियम 5(2))

1.31 राज्यों के अधिनियम, अध्यादेशों के प्राधिकृत हिंदी पाठ

जहां किसी राज्य के विधान मंडल ने उस राज्य के विधान मंडल द्वारा पारित अधिनियम में अथवा उस राज्य के राज्यपाल द्वारा प्रख्यापित अध्यादेश में प्रयोग के लिए हिंदी से भिन्न कोई भाषा निर्धारित की है, वहां उस राज्य के राज्यपाल के प्राधिकार से उस राज्य के शासकीय राजपत्र में उस अधिनियम या अध्यादेश का हिंदी में प्रकाशित अनुवाद हिंदी भाषा में उसका प्राधिकृत पाठ समझा जाता है। (अधिनियम धारा 6)

1.32 उच्चतम/ उच्च न्यायालय की भाषा

उच्चतम न्यायालय और प्रत्येक उच्च न्यायालय में सभी कार्यवाहियाँ अंग्रेजी भाषा में की जानी अपेक्षित हैं। (संविधान अनुच्छेद 348(1)(क))

परंतु किसी राज्य का राज्यपाल, राष्ट्रपति की पूर्व सहमति से उस उच्च न्यायालय जिसका मुख्य स्थान उस राज्य में है की कार्यवाहीयों में (उच्च न्यायालय द्वारा दिए गए निर्णय या आदेश को छोड़कर) हिंदी भाषा का या उस राज्य के शासकीय प्रयोजनों के लिए प्रयोग में आने वाली किसी अन्य भाषा का प्रयोग प्राधिकृत कर सकता है।

(संविधान अनुच्छेद 348(2))

इस प्रावधान के अधीन उत्तर प्रदेश, मध्य प्रदेश, बिहार और राजस्थान में स्थित इलाहाबाद, जबलपुर, पटना और जोधपुर उच्च न्यायालय में हिंदी का प्रयोग प्राधिकृत किया गया है।

1.33 उच्च न्यायालय के निर्णय आदि में हिंदी या अन्य राजभाषा का वैकल्पिक प्रयोग

1) किसी राज्य का राज्यपाल, राष्ट्रपति की पूर्व सहमति से अंग्रेजी भाषा के अतिरिक्त, हिंदी या उस राज्य की राजभाषा का प्रयोग उस राज्य के उच्च न्यायालय द्वारा पारित या दिए गए किसी निर्णय या आदेश के प्रयोजन के लिए भी प्राधिकृत कर सकता है, पर ऐसी स्थिति में उसके साथ साथ उच्च न्यायालय के अधिकार से निकाले गए अंग्रेजी भाषा में उसका अनुवाद भी साथ लगाया जाएगा। (अधिनियम की धारा 7)

इस प्रावधान के अधीन उत्तर प्रदेश, मध्य प्रदेश, बिहार और राजस्थान में स्थित इलाहाबाद, जबलपुर, पटना और जोधपुर उच्च न्यायालय में निर्णय या आदेश के लिए हिंदी का प्रयोग

प्राधिकृत किया गया है।

2) इन उच्च न्यायालय द्वारा हिंदी में दिए गए निर्णय या आदेश को प्राधिकृत और अधीप्रमाणित माना जाएगा। यह अपेक्षा कि ऐसे निर्णयों के साथ उच्च न्यायालय के प्राधिकार से निकाले गए अंग्रेजी भाषा में अनुवाद भी सम्मिलित किया जाए, एक अतिरिक्त सांविधिक अपेक्षा है, इससे हिंदी में दिए गए निर्णय का अधिप्रमाणित या प्राधिकृत स्वरूप समाप्त नहीं होता।

1.34 विभिन्न राजभाषा कार्यान्वयन समितियां

1.34.1 संसदीय राजभाषा समिति

राजभाषा अधिनियम की धारा 4 के अधीन संसदीय राजभाषा समिति गठित की गई है। इस समिति में 30 सदस्य हैं नमें सेजि ,20 लोकसभा तथा 10 राज्यसभा के सदस्य हैंजो क्रमशः , लोकसभा के सदस्य तथा राज्यसभा के सदस्यों द्वारा अनुपातिक प्रतिनिधित्व प्रणाली के अनुसार एकल संक्रमणीय मत द्वारा निर्वाचित किए गए हैं। इस समिति का कर्तव्य है कि संघ के राजकीय प्रयोजनों के लिए हिंदी के प्रयोग में की गई प्रगति का पुनर्विलोकन करें और उस पर सिफारिश करते हुए राष्ट्रपति को प्रतिवेदन करें। राष्ट्रपति उस प्रतिवेदन को संसद के हर सदन के समक्ष रखवायेंगे और सभी राज्य सरकारों को भिजवाएंगे। राष्ट्रपति इस प्रतिवेदन पर और उस पर राज्य सरकारों ने यदि कोई मत व्यक्त किए हो तो उन पर विचार करने के पश्चात उस प्रतिवेदन के या उसके किसी भाग के अनुसार निदेश निकाल सकेंगेपर इस प्रकार निकाले गए , निदेश राजभाषा अधिनियम की धारा3 के उपबंधों से असंगत नहीं होंगे।

(4 अधिनियम की धारा)

1.34.2 नगर राजभाषा कार्यान्वयन समिति

"नराकास" का गठन: राजभाषा विभाग के दिनांक 22.11.1976 के का.ज्ञा.सं.

1.34.2 नगर राजभाषा कार्यान्वयन समिति

नराकास" का गठन: राजभाषा विभाग के दिनांक 22.11.1976 के का.ज्ञा.सं. 1/14011/12/76-रा.भा.(का-1) के अनुसार देश के उन सभी नगरों में जहां केंद्रीय सरकार के 10 या इससे अधिक कार्यालय हों, नगर राजभाषा कार्यान्वयन समितियों का गठन किया जा सकता है। समिति का गठन राजभाषा विभाग के क्षेत्रीय कार्यान्वयन कार्यालयों से प्राप्त प्रस्तावों के आधार पर भारत सरकार के सचिव(राजभाषा) की अनुमति से किया जाता है।

अध्यक्षता: इन समितियों की अध्यक्षता नगर विशेष में स्थित केंद्रीय सरकार के कार्यालयों/उपक्रमों/बैंकों आदि के वरिष्ठतम अधिकारियों में से किसी एक के द्वारा की जाती है। अध्यक्ष को राजभाषा विभाग द्वारा नामित किया जाता है। नामित किए जाने से पूर्व प्रस्तावित अध्यक्ष से समिति की अध्यक्षता के संबंध में लिखित सहमति प्राप्त की जाती है।

सदस्यता: नगर में स्थित केंद्रीय सरकार के कार्यालय/उपक्रम/बैंक आदि अनिवार्य रूप से इस समिति के सदस्य होते हैं। उनके वरिष्ठतम अधिकारियों(प्रशासनिक प्रधानों) से यह अपेक्षा की जाती है कि वे समिति की बैठकों में नियमित रूप से भाग लें।

सदस्य- सचिव:समिति के सचिवालय के संचालन के लिए समिति के अध्यक्ष द्वारा अपने कार्यालय से अथवा किसी सदस्य कार्यालय से एक हिंदी विशेषज्ञ को उसकी सहमति से समिति का सदस्य-सचिव मनोनीत किया जाता है। अध्यक्ष की अनुमति से समिति के कार्यकलाप सदस्य-सचिव द्वारा किए जाते हैं।

बैठकें: इन समितियों की वर्ष में दो बैठकें आयोजित की जाती हैं। प्रत्येक समिति की बैठकें आयोजित करने के लिए राजभाषा विभाग द्वारा एक कैलेंडर रखा जाता है जिसमें प्रत्येक समिति की बैठक हेतु एक निश्चित महीना निर्धारित किया जाता है। इन बैठकों के आयोजन संबंधी सूचना समिति के गठन के समय दी जाती है और निर्धारित महीनों में समिति को अपनी बैठकें करनी होती हैं।

प्रतिनिधित्व: इन समितियों की बैठकों में नगर विशेष में स्थित केंद्रीय सरकार के कार्यालयों/उपक्रमों/बैंकों आदि के प्रशासनिक प्रधान भाग लेते हैं। राजभाषा विभाग (मुख्यालय) एवं इसके क्षेत्रीय कार्यान्वयन कार्यालय के अधिकारी भी इन बैठकों में राजभाषा विभाग का प्रतिनिधित्व करते हैं। नगर स्थित केंद्रीय सचिवालय हिंदी परिषद की शाखाओं में से किसी एक प्रतिनिधि एवं हिंदी शिक्षण योजना के किसी एक अधिकारी को भी बैठक में

आमंत्रित किया जाता है।

उद्देश्य: केंद्रीय सरकार के देश भर में फैले हुए कार्यालयों/उपक्रमों/बैंकों आदि में राजभाषा के प्रगामी प्रयोग को बढ़ावा देने और राजभाषा नीति के कार्यान्वयन के मार्ग में आ रही कठिनाइयों को दूर करने के लिए एक संयुक्त मंच की आवश्यकता महसूस की गई ताकि वे मिल बैठकर सभी कार्यालय/उपक्रम/बैंक आदि चर्चा कर सकें । फलत: नगर राजभाषा कार्यान्वयन समितियों के गठन का निर्णय लिया गया। इन समितियों के गठन का प्रमुख उद्देश्य केंद्रीय सरकार के कार्यालयों/उपक्रमों/बैंकों आदि में राजभाषा नीति के कार्यान्वयन की समीक्षा करना, इसे बढ़ावा देना और इसके मार्ग में आई कठिनाइयों को दूर करना है।

1.34.3 विभागीय राजभाषा कार्यान्वयन समिति

विभागीय राजभाषा कार्यान्वयन समिति की बैठक प्रत्येक तिमाही में नियमित रूप से आयोजित की जानी चाहिए। बैठक में कार्यालय में होने वाले राजभाषा सम्बंधित कार्यों से जुड़े निर्णय लिए जाते हैं।

1.35 हिंदी का प्रचार और विकास

केंद्रीय सरकार का यह कर्तव्य है कि वह हिंदी भाषा का प्रसार बढ़ाए उसका विकास करें ताकि भारत की सामसिक संस्कृति के सभी तत्वों की अभिव्यक्ति का माध्यम बन सके और हिंदी भाषा की प्रकृति में हस्तक्षेप किए बिना हिंदुस्तानी के और संविधान की आठवीं अनुसूची में विनिर्दिष्ट भारत की अन्य भाषाओं के प्रयुक्त रूप, शैली और पदों को आत्मसात करते हुए और जहां आवश्यक या वांछनीय हो उसके शब्द भंडार के लिए मुख्यतः संस्कृत से और गौणतः अन्य भाषाओं से शब्द ग्रहण करते हुए उसकी समृद्धि सुनिश्चित करें।

(संविधान का अनुच्छेद 351)

1.36 केंद्रीय सरकार के कार्यालयों की परिभाषा

राजभाषा नियम 2(ख) के अनुसार केंद्रीय सरकार के कार्यालय के अंतर्गत निम्नलिखित भी शामिल हैं-

1) केंद्रीय सरकार का कोई मंत्रालय या विभाग या कार्यालय
2) केंद्रीय सरकार द्वारा नियुक्त किसी आयोग समिति या अधिकरण का कोई कार्यालय और
3) केंद्रीय सरकार के स्वामित्व में या नियंत्रण के अधीन किसी निगम या कंपनी का कोई

कार्यालय।

इसलिए राजभाषा अधिनियम, राजभाषा नियम सरकारी उपक्रमों और भारतीय रिजर्व बैंक, राष्ट्रीयकृत बैंक और ग्रामीण विकास बैंक भारतीय औद्योगिक विकास बैंक सहित सभी राष्ट्रीयकृत बैंक पर उसी तरह लागू होते हैं जिस प्रकार केंद्रीय सरकार के अन्य कार्यालयों पर लागू होते हैं। संघ की राजभाषा नीति उन पर भी लागू होती है।

1.37 क, ख तथा ग क्षेत्र

क क्षेत्र - इसके अंतर्गत बिहार, हरियाणा, हिमाचल प्रदेश, मध्य प्रदेश, छत्तीसगढ़, झारखंड, उत्तराखंड, राजस्थान और उत्तर प्रदेश राज्य तथा अंडमान निकोबार दीप समूह, दिल्ली संघ राज्य क्षेत्र शामिल हैं।

ख क्षेत्र - इसके अंतर्गत गुजरात, महाराष्ट्र और पंजाब राज्य तथा चंडीगढ़, दमनदीव तथा दादरा नगर हवेली संघ राज्य क्षेत्र शामिल हैं।

ग क्षेत्र - इसके अंतर्गत क तथा ख क्षेत्रों में शामिल राज्यों और संघ राज्य क्षेत्रों के अलावा राज्य तथा संघ राज्य क्षेत्र शामिल हैं।

(राजभाषा नियम 2 (च)(छ)(ज))

1.38 संघ शासित क्षेत्रों में राजभाषा नीति का कार्यान्वयन

1) संघ राज्य क्षेत्र दिल्ली और अंडमान निकोबार द्वीप समूह में केंद्रीय सरकार की राजभाषा नीति को लागू करने की उसी प्रकार व्यवस्था की जाए जिस प्रकार केंद्रीय सरकार के मंत्रालयों विभागों तथा अन्य कार्यालयों आदि के बारे में की गई है।

2) दादरा नगर हवेली प्रशासन लक्ष्यदीप प्रशासन और दमन दीव प्रशासन में राजभाषा नीति के अनुपालन की व्यवस्था उसी प्रकार की जाए जिस प्रकार केंद्रीय सरकार के मंत्रालयों विभागों तथा अन्य कार्यालयों आदि के बारे में की गई है।



राजभाषा अधिनियम, 1963

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(यथासंशोधित, 1967)

(1963 का अधिनियम संख्यांक 19)

उन भाषाओं का, जो संघ के राजकीय प्रयोजनों, संसद में कार्य के संव्यवहार, केन्द्रीय और राज्य अधिनियमों और उच्च न्यायालयों में कतिपय प्रयोजनों के लिए प्रयोग में लाई जा सकेंगी, उपबन्ध करने के लिए अधिनियम । भारत गणराज्य के चौदहवें वर्ष में संसद द्वारा निम्नलिखित रूप में यह अधिनियमित होः-

1 **संक्षिप्त नाम और प्रारम्भ-**

I. यह अधिनियम राजभाषा अधिनियम, 1963 कहा जा सकेगा।

II. धारा 3, जनवरी, 1965 के 26 वें दिन को प्रवृत्त होगी और इस अधिनियम के शेष उपबन्ध उस तारीख को प्रवृत्त होंगे जिसे केन्द्रीय सरकार,शासकीय राजपत्र में अधिसूचना द्वारा नियत करे और इस अधिनियम के विभिन्न उपबन्धों के लिए विभिन्न तारीखें नियत की जा सकेंगी।

2. **परिभाषाएं--इस अधिनियम में जब तक कि संदर्भ से अन्यथा अपेक्षित न हो,**

a. 'नियत दिन' से, धारा 3 के सम्बन्ध में, जनवरी, 1965 का 26वां दिन अभिप्रेत है और इस अधिनियम के किसी अन्य उपबन्ध के सम्बन्ध में वह दिन अभिप्रेत है जिस दिन

को वह उपबन्ध प्रवृत्त होता है;

b. 'हिन्दी' से वह हिन्दी अभिप्रेत है जिसकी लिपि देवनागरी है।

3. संघ के राजकीय प्रयोजनों के लिए और संसद में प्रयोग के लिए अंग्रेजी भाषा का रहना--

3.1. संविधान के प्रारम्भ से पन्द्रह वर्ष की कालावधि की समाप्ति हो जाने पर भी, हिन्दी के अतिरिक्त अंग्रेजी भाषा, नियत दिन से ही,

संघ के उन सब राजकीय प्रयोजनों के लिए जिनके लिए वह उस दिन से ठीक पहले प्रयोग में लाई जाती थी ; तथा

संसद में कार्य के संव्यवहार के लिए प्रयोग में लाई जाती रह सकेगी;

परंतु संघ और किसी ऐसे राज्य के बीच, जिसने हिन्दी को अपनी राजभाषा के रूप में नहीं अपनाया है, पत्रादि के प्रयोजनों के लिए अंग्रेजी भाषा प्रयोग में लाई जाएगी;

परन्तु यह और कि जहां किसी ऐसे राज्य के, जिसने हिन्दी को अपनी राजभाषा के रूप में अपनाया है और किसी अन्य राज्य के, जिसने हिन्दी को अपनी राजभाषा के रूप में नहीं अपनाया है, बीच पत्रादि के प्रयोजनों के लिए हिन्दी को प्रयोग में लाया जाता है, वहां हिन्दी में ऐसे पत्रादि के साथ-साथ उसका अनुवाद अंग्रेजी भाषा में भेजा जाएगा।

परन्तु यह और भी कि इस उपधारा की किसी भी बात का यह अर्थ नहीं लगाया जाएगा कि वह किसी ऐसे राज्य को, जिसने हिन्दी को अपनी राजभाषा के रूप में नहीं अपनाया है, संघ के साथ या किसी ऐसे राज्य के साथ, जिसने हिन्दी को अपनी राजभाषा के रूप में अपनाया है, या किसी अन्य राज्य के साथ, उसकी सहमति से, पत्रादि के प्रयोजनों के लिए हिन्दी को प्रयोग में लाने से निवारित करती है, और ऐसे किसी मामले में उस राज्य के साथ पत्रादि के प्रयोजनों के लिए अंग्रेजी भाषा का प्रयोग बाध्यकर न होगा।

3.2. उपधारा (1) में अन्तर्विष्ट किसी बात के होते हुए भी, जहां पत्रादि के प्रयोजनों के लिए हिन्दी या अंग्रेजी भाषा--

i. केन्द्रीय सरकार के एक मंत्रालय या विभाग या कार्यालय के और दूसरे मंत्रालय या विभाग या कार्यालय के बीच;

ii. केन्द्रीय सरकार के एक मंत्रालय या विभाग या कार्यालय के और केन्द्रीय सरकार के स्वामित्व में के या नियंत्रण में के किसी निगम या कम्पनी या उसके किसी कार्यालय

के बीच;

iii. केन्द्रीय सरकार के स्वामित्व में के या नियंत्रण में के किसी निगम या कम्पनी या उसके किसी कार्यालय के और किसी अन्य ऐसे निगम या कम्पनी या कार्यालय के बीच;

प्रयोग में लाई जाती है वहां उस तारीख तक, जब तक पूर्वोक्त संबंधित मंत्रालय, विभाग, कार्यालय या विभाग या कम्पनी का कर्मचारीवृद हिन्दी का कार्यसाधक ज्ञान प्राप्त नहीं कर लेता, ऐसे पत्रादि का अनुवाद, यथास्थिति, अंग्रेजी भाषा या हिन्दी में भी दिया जाएगा।

3.3. उपधारा (1)में अन्तर्विष्ट किसी बात के होते हुए भी हिन्दी और अंग्रेजी भाषा दोनों ही--

i. संकल्पों, साधारण आदेशों, नियमों, अधिसूचनाओं, प्रशासनिक या अन्य प्रतिवेदनों या प्रेस विज्ञप्तियों के लिए, जो केन्द्रीय सरकार द्वारा या उसके किसी मंत्रालय, विभाग या कार्यालय द्वारा या केन्द्रीय सरकार के स्वामित्व में के या नियंत्रण में के किसी निगम या कम्पनी द्वारा या ऐसे निगम या कम्पनी के किसी कार्यालय द्वारा निकाले जाते हैं या किए जाते हैं;

ii. संसद के किसी सदन या सदनों के समक्ष रखे गए प्रशासनिक तथा अन्य प्रतिवेदनों और राजकीय कागज-पत्रों के लिए;

iii. केन्द्रीय सरकार या उसके किसी मंत्रालय, विभाग या कार्यालय द्वारा या उसकी ओर से या केन्द्रीय सरकार के स्वामित्व में के या नियंत्रण में के किसी निगम या कम्पनी द्वारा या ऐसे निगम या कम्पनी के किसी कार्यालय द्वारा निष्पादित संविदाओं और करारों के लिए तथा निकाली गई अनुज्ञप्तीयों, अनुज्ञापत्रों, सूचनाओं और निविदा-प्ररूपों के लिए, प्रयोग में लाई जाएगी।

3.4. उपधारा (1)या उपधारा (2) या उपधारा (3) के उपबन्धों पर प्रतिकूल प्रभाव डाले बिना यह है कि केन्द्रीय सरकार धारा 8 के अधीन बनाए गए नियमों द्वारा उस भाषा या उन भाषाओं का उपबन्ध कर सकेगी जिसे या जिन्हें संघ के राजकीय प्रयोजन के लिए, जिसके अन्तर्गत किसी मंत्रालय,विभाग, अनुभाग या कार्यालय का कार्यकरण है, प्रयोग में लाया जाना है और ऐसे नियम बनाने में राजकीय कार्य के शीघ्रता और दक्षता के साथ निपटारे का तथा जन साधारण के हितों का सम्यक ध्यान रखा जाएगा और इस प्रकार बनाए गए नियम विशिष्टतया यह सुनिश्चित करेंगे कि जो व्यक्ति संघ के कार्यकलाप के सम्बन्ध में सेवा कर रहे हैं और जो या

तो हिन्दी में या अंग्रेजी भाषा में प्रवीण हैं वे प्रभावी रूप से अपना काम कर सकें और यह भी कि केवल इस आधार पर कि वे दोनों ही भाषाओं में प्रवीण नहीं है उनका कोई अहित नहीं होता है।

3.5. उपधारा (1)के खंड (क) के उपबन्ध और उपधारा (2), उपधारा (3) और उपधारा (4), के उपबन्ध तब तक प्रवृत्त बने रहेंगे जब तक उनमें वर्णित प्रयोजनों के लिए अंग्रेजी भाषा का प्रयोग समाप्त कर देने के लिए ऐसे सभी राज्यों के विधान मण्डलों द्वारा, जिन्होंने हिन्दी को अपनी राजभाषा के रूप में नहीं अपनाया है, संकल्प पारित नहीं कर दिए जाते और जब तक पूर्वोक्त संकल्पों पर विचार कर लेने के पश्चात् ऐसी समाप्ति के लिए संसद के हर एक सदन द्वारा संकल्प पारित नहीं कर दिया जाता।

4. राजभाषा के सम्बन्ध में समिति -

4.1. जिस तारीख को धारा 3 प्रवृत्त होती है उससे दस वर्ष की समाप्ति के पश्चात, राजभाषा के सम्बन्ध में एक समिति, इस विषय का संकल्प संसद के किसी भी सदन में राष्ट्रपति की पूर्व मंजूरी से प्रस्तावित और दोनों सदनों द्वारा पारित किए जाने पर, गठित की जाएगी।

4.2. इस समिति में तीस सदस्य होंगे जिनमें से बीस लोक सभा के सदस्य होंगे तथा दस राज्य सभा के सदस्य होंगे, जो क्रमशः लोक सभा के सदस्यों तथा राज्य सभा के सदस्यों द्वारा आनुपातिक प्रतिनिधित्व पद्धति के अनुसार एकल संक्रमणीय मत द्वारा निर्वाचित होंगे।

4.3. इस समिति का कर्तव्य होगा कि वह संघ के राजकीय प्रयोजनों के लिए हिन्दी के प्रयोग में की गई प्रगति का पुनर्विलोकन करें और उस पर सिफारिशें करते हुए राष्ट्रपति को प्रतिवेदन करें और राष्ट्रपति उस प्रतिवेदन को संसद् के हर एक सदन के समक्ष रखवाएगा और सभी राज्य सरकारों को भिजवाएगा।

4.4. राष्ट्रपति उपधारा (3) में निर्दिष्ट प्रतिवेदन पर और उस पर राज्य सरकारों ने यदि कोई मत अभिव्यक्त किए हों तो उन पर विचार करने के पश्चात् उस समस्त प्रतिवेदन के या उसके किसी भाग के अनुसार निदेश निकाल सकेगा:

परन्तु इस प्रकार निकाले गए निदेश धारा 3 के उपबन्धों से असंगत नहीं होंगे।

5. केन्द्रीय अधिनियमों आदि का प्राधिकृत हिन्दी अनुवाद-

5.1. नियत दिन को और उसके पश्चात् शासकीय राजपत्र में राष्ट्रपति के प्राधिकार से प्रकाशित--

क) किसी केन्द्रीय अधिनियम का या राष्ट्रपति द्वारा प्रख्यापित किसी अध्यादेश का, अथवा

ख) संविधान के अधीन या किसी केन्द्रीय अधिनियम के अधीन निकाले गए किसी आदेश, नियम, विनियम या उपविधि का हिन्दी में अनुवाद उसका हिन्दी में प्राधिकृत पाठ समझा जाएगा।

5.2. नियत दिन से ही उन सब विधेयकों के, जो संसद के किसी भी सदन में पुरःस्थापित किए जाने हों और उन सब संशोधनों के, जो उनके समबन्ध में संसद के किसी भी सदन में प्रस्तावित किए जाने हों, अंग्रेजी भाषा के प्राधिकृत पाठ के साथ-साथ उनका हिन्दी में अनुवाद भी होगा जो ऐसी रीति से प्राधिकृत किया जाएगा, जो इस अधिनियम के अधीन बनाए गए नियमों द्वारा विहित की जाए।

6. कतिपय दशाओं में राज्य अधिनियमों का प्राधिकृत हिन्दी अनुवाद-

जहां किसी राज्य के विधानमण्डल ने उस राज्य के विधानमण्डल द्वारा पारित अधिनियमों में अथवा उस राज्य के राज्यपाल द्वारा प्रख्यापित अध्यादेशों में प्रयोग के लिए हिन्दी से भिन्न कोई भाषा विहित की है वहां, संविधान के अनुच्छेद 348 के खण्ड (3) द्वारा अपेक्षित अंग्रेजी भाषा में उसके अनुवाद के अतिरिक्त, उसका हिन्दी में अनुवाद उस राज्य के शासकीय राजपत्र में, उस राज्य के राज्यपाल के प्राधिकार से, नियत दिन को या उसके पश्चात् प्रकाशित किया जा सकेगा और ऐसी दशा में ऐसे किसी अधिनियम या अध्यादेश का हिन्दी में अनुवाद हिन्दी भाषा में उसका प्राधिकृत पाठ समझा जाएगा।

7. उच्च न्यायालयों के निर्णयों आदि में हिन्दी या अन्य राजभाषा का वैकल्पिक प्रयोग-

नियत दिन से ही या तत्पश्चात् किसी भी दिन से किसी राज्य का राज्यपाल, राष्ट्रपति की पूर्व सम्मति से, अंग्रेजी भाषा के अतिरिक्त हिन्दी या उस राज्य की राजभाषा का प्रयोग, उस राज्य के उच्च न्यायालय द्वारा पारित या दिए गए किसी निर्णय, डिक्री या आदेश के प्रयोजनों के लिए प्राधिकृत कर सकेगा और जहां कोई निर्णय, डिक्री या आदेश (अंग्रेजी भाषा से भिन्न) ऐसी किसी भाषा में पारित किया या दिया जाता है वहां उसके साथ-साथ उच्च न्यायालय के प्राधिकार से निकाला गया अंग्रेजी भाषा में उसका अनुवाद भी होगा।

8. नियम बनाने की शक्ति -

8.1. केन्द्रीय सरकार इस अधिनियम के प्रयोजनों को कार्यान्वित करने के लिए नियम, शासकीय राजपत्र में अधिसूचना द्वारा, बना सकेगी।

8.2. इस धारा के अधीन बनाया गया हर नियम, बनाए जाने के पश्चात् यथाशीघ्र, संसद के हर एक सदन के समक्ष, जब वह सत्र में हो, कुल तीस दिन की अवधि के लिए रखा जाएगा। वह अवधि एक सत्र में, अथवा दो या अधिक आनुक्रमिक सत्रों में पूरी हो सकेगी। यदि उस सत्र के या पूर्वोक्त आनुक्रममिक सत्रों के ठीक बाद के सत्र के अवसान के पूर्व दोनों सदन उस नियम में कोई परिवर्तन करने के लिए सहमत हो जाएं तो तत्पश्चात वह ऐसे परिवर्तित रुप में ही प्रभावी होगा। यदि उक्त अवसान के पूर्व दोनों सदन सहमत हो जाएं कि वह नियम नहीं बनाया जाना चाहिए तो तत्पश्चात यह निस्प्रभाव हो जाएगा। किन्तु नियम के ऐसे परिवर्तित या निस्प्रभाव होने से उसके अधीन पहले की गई किसी बात की विधिमान्यता पर प्रतिकूल प्रभाव नहीं पड़ेगा।

9. कतिपय उपबन्धों का जम्मू-कश्मीर को लागू न होना- धारा 6 और धारा 7 के उपबन्ध जम्मू-कश्मीर राज्य को लागू न होंगे।

राजभाषा नियम, 1976

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(संघ के शासकीय प्रयोजनों के लिए प्रयोग)

(यथा संशोधित, 1987, 2007 तथा 2011)

सा.का.नि. 1052 --राजभाषा अधिनियम, 1963 (1963 का 19) की धारा 3 की उपधारा (4) के साथ पठित धारा 8 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, केन्द्रीय सरकार निम्नलिखित नियम बनाती है, अर्थातः-

1. संक्षिप्त नाम, विस्तार और प्रारम्भ--

I. इन नियमों का संक्षिप्त नाम राजभाषा (संघ के शासकीय प्रयोजनों के लिए प्रयोग) नियम, 1976 है।

II. इनका विस्तार, तमिलनाडु राज्य के सिवाय सम्पूर्ण भारत पर है।

III. ये राजपत्र में प्रकाशन की तारीख को प्रवृत्त होंगे।

2. परिभाषाएं-- इन नियमों में, जब तक कि संदर्भ से अन्यथा अपेक्षित न होः-

I. 'अधिनियम' से राजभाषा अधिनियम, 1963 (1963 का 19) अभिप्रेत है;

II. 'केन्द्रीय सरकार के कार्यालय' के अन्तर्गत निम्नलिखित भी है, अर्थातः-

III. केन्द्रीय सरकार का कोई मंत्रालय, विभाग या कार्यालय;

IV. केन्द्रीय सरकार द्वारा नियुक्त किसी आयोग, समिति या अधिकरण का कोई कार्यालय; और

V. केन्द्रीय सरकार के स्वामित्व में या नियंत्रण के अधीन किसी निगम या कम्पनी का कोई कार्यालय;

VI. 'कर्मचारी' से केन्द्रीय सरकार के कार्यालय में नियोजित कोई व्यक्ति अभिप्रेत है;

VII. 'अधिसूचित कार्यालय' से नियम 10 के उपनियम (4) के अधीन अधिसूचित कार्यालय, अभिप्रेत है;

VIII. 'हिन्दी में प्रवीणता' से नियम 9 में वर्णित प्रवीणता अभिप्रेत है ;

IX. 'क्षेत्र क' से बिहार, हरियाणा, हिमाचल प्रदेश, मध्य प्रदेश, छत्तीसगढ़, झारखंड़, उत्तराखंड राजस्थान और उत्तर प्रदेश राज्य तथा अंडमान और निकोबार द्वीप समूह, दिल्ली संघ राज्य क्षेत्र अभिप्रेत है;

X. 'क्षेत्र ख' से गुजरात, महाराष्ट्र और पंजाब राज्य तथा चंडीगढ़, दमण और दीव तथा दादरा और नगर हवेली संघ राज्य क्षेत्र अभिप्रेत हैं;

XI. 'क्षेत्र ग' से खंड (च) और (छ) में निर्दिष्ट राज्यों और संघ राज्य क्षेत्रों से भिन्न राज्य तथा संघ राज्य क्षेत्र अभिप्रेत है;

XII. हिन्दी का कार्यसाधक ज्ञान' से नियम 10 में वर्णित कार्यसाधक ज्ञान अभिप्रेत है।

3. राज्यों आदि और केन्द्रीय सरकार के कार्यालयों से भिन्न कार्यालयों के साथ पत्रादि-

1. केन्द्रीय सरकार के कार्यालय से क्षेत्र 'क' में किसी राज्य या संघ राज्य क्षेत्र को या ऐसे राज्य या संघ राज्य क्षेत्र में किसी कार्यालय (जो केन्द्रीय सरकार का कार्यालय न हो) या व्यक्ति को पत्रादि असाधारण दशाओं को छोड़कर हिन्दी में होंगे और यदि उनमें से किसी को कोई पत्रादि अंग्रेजी में भेजे जाते हैं तो उनके साथ उनका हिन्दी अनुवाद भी भेजा जाएगा।

2. केन्द्रीय सरकार के कार्यालय से--

   a. क्षेत्र 'ख' में किसी राज्य या संघ राज्यक्षेत्र को या ऐसे राज्य या संघ राज्य क्षेत्र में किसी कार्यालय (जो केन्द्रीय सरकार का कार्यालय न हो) को पत्रादि सामान्यतया हिन्दी में होंगे और यदि इनमें से किसी को कोई पत्रादि अंग्रेजी में भेजे जाते हैं तो उनके साथ उनका हिन्दी अनुवाद भी भेजा जाएगाः परन्तु यदि कोई ऐसा राज्य या संघ राज्य क्षेत्र यह चाहता है कि किसी विशिष्ट वर्ग या प्रवर्ग के पत्रादि या उसके किसी कार्यालय के लिए आशयित पत्रादि संबद्ध राज्य या संघ राज्यक्षेत्र की सरकार द्वारा विनिर्दिष्ट अवधि तक अंग्रेजी या हिन्दी में भेजे जाएं और उसके साथ दूसरी भाषा में उसका अनुवाद भी भेजा जाए तो ऐसे पत्रादि उसी रीति से भेजे जाएंगे ;

   b. क्षेत्र 'ख' के किसी राज्य या संघ राज्य क्षेत्र में किसी व्यक्ति को पत्रादि हिन्दी या अंग्रेजी में भेजे जा सकते हैं।

3. केन्द्रीय सरकार के कार्यालय से क्षेत्र 'ग' में किसी राज्य या संघ राज्यक्षेत्र को या ऐसे राज्य में किसी कार्यालय (जो केन्द्रीय सरकार का कार्यालय न हो)या व्यक्ति को पत्रादि अंग्रेजी में होंगे।

4. उप नियम (1) और (2) में किसी बात के होते हुए भी, क्षेत्र 'ग' में केन्द्रीय सरकार के कार्यालय से क्षेत्र 'क'या'ख'में किसी राज्य या संघ राज्यक्षेत्र को या ऐसे राज्य में किसी कार्यालय (जो केन्द्रीय सरकार का कार्यालय न हो) या व्यक्ति को पत्रादि हिन्दी या अंग्रेजी में हो सकते हैं । परन्तु हिन्दी में पत्रादि ऐसे अनुपात में होंगे जो केन्द्रीय सरकार ऐसे कार्यालयों में हिन्दी का कार्यसाधक ज्ञान रखने वाले व्यक्तियों की संख्या,हिन्दी में पत्रादि भेजने की सुविधाओं और उससे आनुषंगिक बातों को ध्यान में रखते हुए समय-समय पर अवधारित करे।

4. केन्द्रीय सरकार के कार्यालयों के बीच पत्रादि-

I. केन्द्रीय सरकार के किसी एक मंत्रालय या विभाग और किसी दूसरे मंत्रालय या विभाग के बीच पत्रादि हिन्दी या अंग्रेजी में हो सकते हैं;

II. केन्द्रीय सरकार के एक मंत्रालय या विभाग और क्षेत्र 'क' में स्थित संलग्न या अधीनस्थ कार्यालयों के बीच पत्रादि हिन्दी में होंगे और ऐसे अनुपात में होंगे जो केन्द्रीय सरकार, ऐसे कार्यालयों में हिन्दी का कार्यसाधक ज्ञान रखने वाले व्यक्तियों की संख्या, हिन्दी में पत्रादि भेजने की सुविधाओं और उससे संबंधित आनुषंगिक बातों को ध्यान में रखते हुए, समय-समय पर अवधारित करे;

III. क्षेत्र 'क' में स्थित केन्द्रीय सरकार के ऐसे कार्यालयों के बीच, जो खण्ड (क) या खण्ड (ख) में विनिर्दिष्ट कार्यालयों से भिन्न हैं, पत्रादि हिन्दी में होंगे;

IV. क्षेत्र 'क' में स्थित केन्द्रीय सरकार के कार्यालयों और क्षेत्र 'ख' या 'ग'में स्थित केन्द्रीय सरकार के कार्यालयों के बीच पत्रादि हिन्दी या अंग्रेजी में हो सकते हैं; परन्तु ये पत्रादि हिन्दी में ऐसे अनुपात में होंगे जो केन्द्रीय सरकार ऐसे कार्यालयों में हिन्दी का कार्यसाधक ज्ञान रखने वाले व्यक्तियों की संख्या,हिन्दी में पत्रादि भेजने की सुविधाओं और उससे आनुषंगिक बातों को ध्यान में रखते हुए समय-समय पर अवधारित करे ;

V. क्षेत्र 'ख' या 'ग' में स्थित केन्द्रीय सरकार के कार्यालयों के बीच पत्रादि हिन्दी या अंग्रेजी में हो सकते हैं;

परन्तु ये पत्रादि हिन्दी में ऐसे अनुपात में होंगे जो केन्द्रीय सरकार ऐसे कार्यालयों में हिन्दी का कार्यसाधक ज्ञान रखने वाले व्यक्तियों की संख्या,हिन्दी में पत्रादि भेजने की सुविधाओं और उससे आनुषंगिक बातों को ध्यान में रखते हुए समय-समय पर अवधारित करे;

परन्तु जहां ऐसे पत्रादि--

i. क्षेत्र 'क' या क्षेत्र 'ख' किसी कार्यालय को संबोधित हैं वहां यदि आवश्यक हो तो, उनका दूसरी भाषा में अनुवाद, पत्रादि प्राप्त करने के स्थान पर किया जाएगा;

ii. क्षेत्र 'ग' में किसी कार्यालय को संबोधित है वहां, उनका दूसरी भाषा में

अनुवाद, उनके साथ भेजा जाएगा;

परन्तु यह और कि यदि कोई पत्रादि किसी अधिसूचित कार्यालय को संबोधित है तो दूसरी भाषा में ऐसा अनुवाद उपलब्ध कराने की अपेक्षा नहीं की जाएगी ।

5. हिन्दी में प्राप्त पत्रादि के उत्तर- नियम 3 और नियम 4 में किसी बात के होते हुए भी, हिन्दी में पत्रादि के उत्तर केन्द्रीय सरकार के कार्यालय से हिन्दी में दिए जाएंगे ।

6. हिन्दी और अंग्रेजी दोनों का प्रयोग- अधिनियम की धारा 3 की उपधारा (3) में निर्दिष्ट सभी दस्तावेजों के लिए हिन्दी और अंग्रेजी दोनों का प्रयोग किया जाएगा और ऐसे दस्तावेजों पर हस्ताक्षर करने वाले व्यक्तियों का यह उत्तरदायित्व होगा कि वे यह सुनिश्चित कर लें कि ऐसी दस्तावेजें हिन्दी और अंग्रेजी दोनों ही में तैयार की जाती हैं, निष्पादित की जाती हैं और जारी की जाती हैं।

7. आवेदन, अभ्यावेदन आदि-

I. कोई कर्मचारी आवेदन, अपील या अभ्यावेदन हिन्दी या अंग्रेजी में कर सकता है।

II. जब उपनियम (1) में विनिर्दिष्ट कोई आवेदन, अपील या अभ्यावेदन हिन्दी में किया गया हो या उस पर हिन्दी में हस्ताक्षर किए गए हों, तब उसका उत्तर हिन्दी में दिया जाएगा।

III. यदि कोई कर्मचारी यह चाहता है कि सेवा संबंधी विषयों (जिनके अन्तर्गत अनुशासनिक कार्यवाहियां भी हैं) से संबंधित कोई आदेश या सूचना,जिसका कर्मचारी पर तामील किया जाना अपेक्षित है, यथास्थिति, हिन्दी या अंग्रेजी में होनी चाहिए तो वह उसे असम्यक विलम्ब के बिना उसी भाषा में दी जाएगी।

8. केन्द्रीय सरकार के कार्यालयों में टिप्पणों का लिखा जाना -

I. कोई कर्मचारी किसी फाइल पर टिप्पण या कार्यवृत्त हिंदी या अंग्रेजी में लिख सकता है और उससे यह अपेक्षा नहीं की जाएगी कि वह उसका अनुवाद दूसरी भाषा में प्रस्तुत करे।

II. केन्द्रीय सरकार का कोई भी कर्मचारी, जो हिन्दी का कार्यसाधक ज्ञान रखता है,

हिन्दी में किसी दस्तावेज के अंग्रेजी अनुवाद की मांग तभी कर सकता है, जब वह दस्तावेज विधिक या तकनीकी प्रकृति का है, अन्यथा नहीं।

III. यदि यह प्रश्न उठता है कि कोई विशिष्ट दस्तावेज विधिक या तकनीकी प्रकृति का है या नहीं तो विभाग या कार्यालय का प्रधान उसका विनिश्चय करेगा।

IV. उपनियम (1) में किसी बात के होते हुए भी, केन्द्रीय सरकार, आदेश द्वारा ऐसे अधिसूचित कार्यालयों को विनिर्दिष्ट कर सकती है जहां ऐसे कर्मचारियों द्वारा,जिन्हें हिन्दी में प्रवीणता प्राप्त है, टिप्पण, प्रारूपण और ऐसे अन्य शासकीय प्रयोजनों के लिए, जो आदेश में विनिर्दिष्ट किए जाएं, केवल हिन्दी का प्रयोग किया जाएगा ।

9. हिन्दी में प्रवीणता-

यदि किसी कर्मचारी ने-

I. मैट्रिक परीक्षा या उसकी समतुल्य या उससे उच्चतर कोई परीक्षा हिन्दी के माध्यम से उत्तीर्ण कर ली है;या

II. स्नातक परीक्षा में अथवा स्नातक परीक्षा की समतुल्य या उससे उच्चतर किसी अन्य परीक्षा में हिन्दी को एक वैकल्पिक विषय के रूप में लिया हो; या

III. यदि वह इन नियमों से उपाबद्ध प्ररूप में यह घोषणा करता है कि उसे हिन्दी में प्रवीणता प्राप्त है;

तो उसके बारे में यह समझा जाएगा कि उसने हिन्दी में प्रवीणता प्राप्त कर ली है ।

10. हिन्दी का कार्यसाधक ज्ञान-

1. a) यदि किसी कर्मचारी ने-

i. मैट्रिक परीक्षा या उसकी समतुल्य या उससे उच्चतर परीक्षा हिन्दी विषय के साथ उत्तीर्ण कर ली है; या

ii. केन्द्रीय सरकार की हिन्दी परीकाा योजना के अन्तर्गत आयोजित प्राज्ञ परीक्षा या यदि उस सरकार द्वारा किसी विशिष्ट प्रवर्ग के पदों के सम्बन्ध में उस योजना के अन्तर्गत कोई निम्नतर परीक्षा विनिर्दिष्ट है, वह परीक्षा उत्तीर्ण कर

ली है; या

iii. केन्द्रीय सरकार द्वारा उस निमित्त विनिर्दिष्ट कोई अन्य परीक्षा उत्तीर्ण कर ली है; या

b. यदि वह इन नियमों से उपाबद्ध प्ररूप में यह घोषणा करता है कि उसने ऐसा ज्ञान प्राप्त कर लिया है;

तो उसके बारे में यह समझा जाएगा कि उसने हिन्दी का कार्यसाधक ज्ञान प्राप्त कर लिया है।

2. यदि केन्द्रीय सरकार के किसी कार्यालय में कार्य करने वाले कर्मचारियों में से अस्सी प्रतिशत ने हिन्दी का ऐसा ज्ञान प्राप्त कर लिया है तो उस कार्यालय के कर्मचारियों के बारे में सामान्यतया यह समझा जाएगा कि उन्होंने हिन्दी का कार्यसाधक ज्ञान प्राप्त कर लिया है।

3. केन्द्रीय सरकार या केन्द्रीय सरकार द्वारा इस निमित्त विनिर्दिष्ट कोई अधिकारी यह अवधारित कर सकता है कि केन्द्रीय सरकार के किसी कार्यालय के कर्मचारियों ने हिन्दी का कार्यसाधक ज्ञान प्राप्त कर लिया है या नहीं।

4. केन्द्रीय सरकार के जिन कार्यालयों में कर्मचारियों ने हिन्दी का कार्यसाधक ज्ञान प्राप्त कर लिया है उन कार्यालयों के नाम राजपत्र में अधिसूचित किए जाएंगे;

परन्तु यदि केन्द्रीय सरकार की राय है कि किसी अधिसूचित कार्यालय में काम करने वाले और हिन्दी का कार्यसाधक ज्ञान रखने वाले कर्मचारियों का प्रतिशत किसी तारीख में से उपनियम (2) में विनिर्दिष्ट प्रतिशत से कम हो गया है, तो वह राजपत्र में अधिसूचना द्वारा घोषित कर सकती है कि उक्त कार्यालय उस तारीख से अधिसूचित कार्यालय नहीं रह जाएगा ।

11. मैनुअल, संहिताएं, प्रक्रिया संबंधी अन्य साहित्य, लेखन सामग्री आदि-

1. केन्द्रीय सरकार के कार्यालयों से संबंधित सभी मैनुअल, संहिताएं और प्रक्रिया संबंधी अन्य साहित्य, हिन्दी और अंग्रेजी में द्विभाषिक रूप में यथास्थिति, मुद्रित या साइक्लोस्टाइल किया जाएगा और प्रकाशित किया जाएगा।
2. केन्द्रीय सरकार के किसी कार्यालय में प्रयोग किए जाने वाले रजिस्टरों के प्ररूप और शीर्षक हिन्दी और अंग्रेजी में होंगे।
3. केन्द्रीय सरकार के किसी कार्यालय में प्रयोग के लिए सभी नामपट्ट, सूचना पट्ट,

पत्रशीर्ष और लिफाफों पर उत्कीर्ण लेख तथा लेखन सामग्री की अन्य मदें हिन्दी और अंग्रेजी में लिखी जाएंगी, मुद्रित या उत्कीर्ण होंगी; परन्तु यदि केन्द्रीय सरकार ऐसा करना आवश्यक समझती है तो वह, साधारण या विशेष आदेश द्वारा, केन्द्रीय सरकार के किसी कार्यालय को इस नियम के सभी या किन्हीं उपबन्धों से छूट दे सकती है।

12. अनुपालन का उत्तरदायित्व-

1. केन्द्रीय सरकार के प्रत्येक कार्यालय के प्रशासनिक प्रधान का यह उत्तरदायित्व होगा कि वह-- यह सुनिश्चित करे कि अधिनियम और इन नियमों के उपबंधों और उपनियम (2) के अधीन जारी किए गए निदेशों का समुचित रूप से अनुपालन हो रहा है; और
इस प्रयोजन के लिए उपयुक्त और प्रभावकारी जांच के लिए उपाय करे ।

2. केन्द्रीय सरकार अधिनियम और इन नियमों के उपबन्धों के सम्यक अनुपालन के लिए अपने कर्मचारियों और कार्यालयों को समय-समय पर आवश्यक निदेश जारी कर सकती है।



राजभाषा वार्षिक कार्यक्रम

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दिनांक 18 जनवरी 1968 को संसद के दोनों सदनों द्वारा पारित राजभाषा संकल्प में यह व्यक्त किया गया है कि -:

"यह सभा संकल्प करती है कि हिंदी के प्रसार एवं विकास की गति को बढ़ाने हेतु तथा संघ के विभिन्न राजकीय प्रयोजनों के लिए इसके उत्तरोत्तर प्रयोग हेतु भारत सरकार द्वारा एक अधिक गहन एवं व्यापक कार्यक्रम तैयार किया जाएगा और उसे कार्यान्वित किया जाएगा और किए गए उपायों एवं की गई प्रगति की विस्तृत वार्षिक मूल्यांकन रिपोर्ट संसद के दोनों सदनों के पटल पर रखी जाएगी और सभी राज्य सरकारों को भेजी जाएगी।"

उक्त संकल्प के अनुसरण में राजभाषा विभाग द्वारा प्रतिवर्ष केंद्र सरकार के कार्यालय द्वारा कार्य बंद के लिए राजभाषा हिंदी के प्रसार और प्रगामी प्रयोग हेतु वार्षिक कार्यक्रम तैयार किया जाता है।

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मानक हिन्दी वर्णमाला तथा अंक

68

भारतीय संघ तथा कुछ राज्यों की राजभाषा स्वीकृत हो जाने के फलस्वरूप हिन्दी का मानक रूप निर्धारित करना बहुत आवश्यक था, वर्णमाला में सर्वत्र एकरूपता रहे और टाइपराइटर आदि आधुनिक यंत्रो के उपयोग में लिपि की अनेकरूपता बाधक न हो।

मनक हिन्दी वर्णमाला

स्वर – अ आ इ ई उ ऊ ए ऐ ओ औ

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व्यंजन -

संयुक्त व्यंजन- क्ष त्र ज्ञ श्र

गृहीत स्वर - ऑ .ख .ज .फ

देवनागरी अंक- १ २ ३ ४ ५
६ ७ ८ ९ ०

भारतीय अंको का अंतराष्ट्रीय रूप -

1 2 3 4 5
6 7 8 9 0

संविधान के अनुच्छेद 343 (1) के अनुसार संघ के राजकीय प्रयोजनों के लिए प्रयुक्त होने वाले अंको के रूप भारतीय अंको का अंतरराष्ट्रीय रूप होगा, परन्तु राष्ट्रपति संघ के किसी भी राजकीय प्रयोजन के लिए भारतीय अंकों के अंतरराष्ट्रीय रूप के साथ-साथ देवनागरी रूप का प्रयोग भी प्राधिकृत कर सकते है।

परिवर्धित देवनागरी वर्णमाला

क्रेंद्रीय हिन्दी निदेशालय ने उपर्युक्त मानक हिन्दी वर्णमाला के साथ ही परिवर्धित देवनागरी वर्णमाला भी विकसित की है, ताकि उसके माध्यम से सभी भारतीय भाषाओं का लिप्यंतरण देवनागरी में हो सके।

हिन्दी वर्तनी का मानकीकरण

किसी भी भाषा के सीखने-सिखाने में सहायक या बाधक बनने वाले दो प्रमुख तत्व हैं उसका व्याकरण और लिपि। लिपि का एक पक्ष है- सामान्य और विशिष्ट स्वनों के पृथक प्रतीक-वर्णो की समृद्धि, उनका परस्पर स्पष्ट आकार-भेद, लिखावट में सरलता तथा स्थान लाघव एवं प्रयत्न-लाघव।

लिपि का दूसरा पक्ष है, वर्तनी। एक ही स्वन को प्रकट करने के लिए विविध वर्णो का प्रयोग वर्तनी को जटिल बना देता है और यह लिपि का एक सामान्य दोष माना जाता है। यद्यपि देवनागरी लिपि में यह दोष न्यूनतम है, फिर भी उसकी कुछ अपनी विशिष्ट कठिनाइयां भी है।

इन सभी कठिनाइयों को दूर कर हिन्दी वर्तन में एकरूपता लाने के लिए भारत सरकार के शिक्षा मंत्रालय ने सन् 1961 में एक विशेषज्ञ समिति नियुक्त की थी। सतिति ने अप्रैल, 1962 में अपनी अंतिम सिफारिशे प्रस्तुत की, जिन्हें सरकार ने स्वीकृत किया। इन्हें 1967 में हिन्दी

वर्तनी का मानकीकरण शीर्षक पुस्तिका में व्याख्या तथा उदाहरण सहित प्रकाशित किया गया था।

वर्तनी संबंधी अद्यतन नियम इस प्रकार हैं-

1. संयुक्त वर्ण

(क) खड़ी पाई वाले व्यंजन

खड़ी पाई वाले व्यंजनों का संयुक्त रूप खड़ी पाई को हटाकर ही बनाया जाना चाहिए, यथा

ख्याति, लग्न, विघ्न	व्यास
कच्चा, छज्जा	श्लोक
नगण्य	राष्ट्रीय
कुत्ता, पथ्य, ध्वनि, न्यास	स्वीकृति
प्यास, डिब्बा, सभ्य, रम्य	यक्ष्मा
शय्या	त्रयंबक
उल्लेख	

(ख) **अन्य व्यंजन**

(अ) क और फ के संयुक्ताक्षरः संयुक्त, पक्का, दफ्तर आदि की तरह बनाए जाएं।

(आ) ड, छ, ट, ठ, ड, ढ, द, और ह के संयुक्ताक्षर हल् चिह्न लगाकर ही बनाए जाएं, यथा-वाड्मय, लट्टू, बुड्ढा, विद्या, चिह्न, आदि।

(इ) संयुक्त र के प्रचलित तीनो रूप यथावत रहेंगे, यथा- प्रकार, धर्म, राष्ट्र

(ई) श्र का प्रचलित रूप ही मान्य होगा। इसे श्र्र के रूप में नही लिखा जाएगा। त् र के संयुक्त रूप के लिए त्र लिखा जाएगा।

(उ) हल् चिह्न युक्त वर्ण से बनने वाले संयुक्ताक्षर के द्वितीय वयंज्न के साथ इ की मात्रा का प्रयोग संबंधित व्यंजन के तत्काल पूर्व की किया जाएगा न कि पूरे युग्म से पूर्व यथा-ट् टिम, कुट्, टिम, द् वितीय, बुद् विधमान, चिह् नित आदि (कुट्टिम, द्वितीय, बुद्धिमान, चिह्नित नहीं)

(ऊ) संस्कृत में संयुक्ताक्षर पुरानी शैली में भी लिखे जा सकेंगे, उदाहरणार्थ - संयुक्त, चिह्न, विद्या, चञ्चल, विद्वान, वृद्ध, अंक, द्वितीय, बुद्धि आदि।

2. विभक्ति चिह्न

(क) हिन्दी के विभक्ति-चिह्न सभी प्रकार के संज्ञा शब्दों में प्रतिपादिक से पृथक लिखे जाएं, जैसे- राम को, राम से आदि तथा स्त्री ने, स्त्री को, स्त्री से आदि, सर्वनाम शब्दों में ये चिह्न प्रतिपदिक के साथ मिलाकर लिखे जाएं, जैसे- उसने, उसको, उससे, उसपर, आदि।
(ख) सर्वनामों के साथ यदि दो विभक्ति-चिह्न हों तो उनमें से पहला मिलाकर और दूसरा पृथ लिखा जाए, जैसे- उसके लिए, इसमें से,
(ग) सर्वनाम और विभक्ति के बीच ही, तक आदि का निपात हो तो विभक्ति को पृथक लिखा जाए, जैसे- आप ही के लिए, मुझ तक को,

3. क्रियापद

संयुक्त क्रियाओं में सभी अंगभूत क्रियाएं पृथक-पृथक लिखी जाएं जैसे-पढ़ा करता है, आ सकता है, जाया करता है, खाया करता है, जा सकता, कर सकता है, किया करता था, पढ़ा करता था, खेला करेगा, घूमता रहेगा, बढ़ते चले जा रहे हैं आदि।

4. हाइफन

हाइफन का विधान स्पष्टता के लिए किया गया है।
(क) द्वंद्व समास में पदो के बीच हाइफन रखा जाए जैसे- राम-लक्ष्मण, शिव-पार्वती-संवाद, देख-रेख, खाना-पीना, खेलना-कूदना आदि।
(ख) सा, जैसा आदि से पूर्व हाइफन रखा जाए, जैसे-तुम -सा, राम-जैसा, चाकू-से तीखे।
(ग) तत्पुरूश समास में हाइफन का प्रयोग केवल वही किया जाए, जहां उसके बिना भ्रम होने की संभावना हो, अन्यथा नहीं, जैसे-भू-तत्व।
सामान्यतः तत्पुरुष समासों में हाइफन लगाने की आवश्यकता नहीं है, जैसे- रामराज्य, राजकुमार, गंगाजल, ग्रामवासी, आत्महत्या आदि

इसी तरह यदि अ-नख (बिना नख का) समस्त पद में हाइफन न लगाया जाए तो उसे अनख पढे जाने से क्रोध काप अर्थ निकाल सकता है। अ-नति (नम्रता का अभाव), अनति (थोडा), अ-परस (जिसे किसी ने न छुआ हो), अपसर (एक चर्म रोग), भू-तत्व (पृथ्वी-तत्व), भूतत्व (भूत होने का भाव) आदि, समस्त पदों की भी यही स्थिति है, ये सभी युग्म वर्तनी और अर्थ दोनों दृष्टियों से भिन्न-भिन्न शब्द है।
(घ) कठिन संधियों से बचने के लिए भी हाइफन का प्रयोग किया जा सकता है, जैसेः द्वि-अक्षर, द्वि-अर्थक आदि।

5. अव्यय

तक, साथ आदि अव्यय सदा पृथक लिखे जाएं, जैसे -आपके साथ, यहां तक, इस नियम को कुछ और उदाहरण देकर स्पष्ट करना आवश्यक है। हिन्दी में आह, ओह, अहा, ऐ, ही, तो, सो, भी, न, जब, तब, यहां, वहां, कहां, सदा, क्या, श्री, तक, भर, मात्र, साथ, कि, किन्तु, मगर, लेकिन, चाहे, या, अथवा, तथा, यथा, और आदि अनेक प्रकार के भावों का बोधा कराने वाले अव्यय हैं। कुछ अव्ययों के आगे विभक्ति-चिह्न भी आते हैं, जैसे- अब से, यहां से, वहां से, सदा से आदि। नियम के अनुसार अव्यय सदा पृथक लिखे जाने चाहिए, जैसे-आप ही के लिए, मुझ तक को, आपके साथ, गज भर कपड़ा, देश भर, रात भर, दिन भर, वह इतना भर दें, मुझे जाने तो दो, काम भी नहीं बना, पचास रूपये मात्र आदि। सम्माननार्थक श्री और जी अव्यय भी पृथक लिखे जाएं जैसे- श्री राम, कन्हैयालाल जी, महात्मा जी आदि।

समस्त पदो में प्रति, मात्र, यथा, आदि, अव्यय पृथक नहीं लिखे जाएंगे, जैसे- प्रतिदिन, प्रतिशत, मानवमात्र, निमित्तमात्र, यथासमय, यथोचित, यह सर्वविदित नियम है कि समास होने पर समस्त पद एक माना जाता है, अतः उसे व्यस्त रूप में न लिखकर एक साथ लिखना ही संगत है।

6. श्रुतिमूलक-य, व

(क) जहां श्रुतिमूलक य, व का प्रयोग विकल्प से होता है, वहां न किया जाए अर्थात- किए-किये, नई-नयी, हुआ-हुवा आदि में पहले (स्वरात्मक) रूपों का ही प्रयोग किया जाए, यह नियम क्रिया, विशेषण, अव्यय आदि सभी रूपों और स्थितियों में लागू माना जाए, जैसे-दिखाए गए, राम के लिए, पुस्तक लिए हुए, नई दिल्ली आदि।

(ख) जहां य श्रुतिमूलक व्याकरणिक परिवर्तन न होकर शब्द का ही मूल तत्व हा वहां वैकल्पक श्रुतिमूलक स्वरात्मक परिवर्तन की आवश्यकता नहीं है, जैसे- स्थायी, व्ययीभाव, दायित्व, यहां स्थाई, अव्यईभाव, दाइत्व नहीं लिखा जाएगा।

7. **अनुस्वार तथा अनुनासिकता-चिह्न (चंद्रबिंदु)**

अनुस्वार और अनुनासिकता चिह्न दोनो प्रचलित रहेंगे।

(क) संयुक्त व्यंजन के रूप में जहॉ पंचमाक्षर के बाद सवर्गीय शेष चार वर्णो में से कोई वर्ण हो तो एकरूपता और मुद्रण/लेखन की सुविधा के लिए अनुस्वार का ही प्रयोग करना चाहिए जैसे-गंगा, चंचल, ठंडा, संध्या, संपादक, आदि में पंचमाक्षर के बाद उसी वर्ग का वर्ण आगे आता है, अतः पंचमाक्षर के स्थान पर अनुस्वार का प्रयोग होगा (गंगा, चंचल,

ठण्डा, संध्या, संपादक का नहीं)। यदि पंचमाक्षर के बाद किसी अन्य वर्ग का की वर्ण आए अथवा वही पंचमाक्षर दुबारा आए तो पंचमाक्षर अनुस्वार के रूप में परिवर्तित नहीं होगा, जैसे-वाड्मय, अन्य, अन्न, सम्मेलन, सम्मति, चिन्मय, उन्मुख आदि। अतः वांगमय, अंय, अंन, संमेलन, संमति, चिंमय, उंमुख आदि रूप ग्राह्य नहीं हैं।

(ख) चंद्रबिंदु के बिना प्रायः अर्थ में भ्रम की गुंजाइश रहती है, जैसे-हंसःहँस, अंगनाःअँगना आदि में अतएव ऐसे भ्रम को दूर करने के लिए चंद्रबिंदु का प्रयोग अवश्य किया जाना चाहिए। किंतु जहां (विशेषकर शिरोरेखा के ऊपर जुड़ने वाली मात्र के साथ) चंद्रबिंदु के प्रयोग से छपाई आदि में बहुत कठिनाई हो और चंद्रबिंदु के स्थान पर बिंदु (अनुस्वार चिह्न) का प्रयोग किसी प्रकार भ्रम उत्पन्न करे, वहां चंद्रबिंदु के स्थान पर बिंदु के प्रयोग की छूट दी जा सकती है, जैसे-नहीं, में, मैं, कविता आदि के प्रसंग में छंद की दृश्टि से चंद्रबिंदु का यथास्थान अवश्य प्रयोग किया जाए, इसी प्रकार छोटे बच्चों की प्रवेषिकाओं में जहां, जैसे-कहॉ, हॅसना, ऑंगन, संवरना आदि।

8. **विदेशी ध्वनियां**

(क) अरबी-फारसी या अंग्रेजी मूलक वे शब्द जो हिन्दी के अंग बन चुके हैं और जिनकी विदेशी ध्वनियॉ का हिन्दी ध्वनियों में रूपांतर हो चुका है, हिन्दी रूप में ही स्वीकार किए जा सकते हैं, जैसे-कलम, किला, दाग, आदि (क़लम, क़िला, द़ाग नहीं) पर जहां उनका शुद्ध विदेशी रूप में प्रयोग अभीष्ट हो अथवा उच्चारण का भेद बताना आवश्यक हो वहां उनके हिंदी में प्रचलित रूपों में यथा स्थान नुक्ते लगाए जाएं जैसे राज:राज । सारांश रूप में यह कहा जा सकता है कि अरबी फारसी एवं अंग्रेजी की मुख्यता पांच ध्वनियाँ (क़, ख़, ग़, ज़, फ़) हिंदी में आई हैं जिनमें से दो(क़ ग़) तो हिंदी उच्चारण में परिवर्तित हो गई हैं ख़ लगभग हिंदी में खपने की प्रक्रिया में है और दो ज़ और फ़ अपने अस्तित्व के लिए संघर्षरत हैं।

ख) अंग्रेजी के जिन शब्दों में अर्धवृत्त को ध्वनि का प्रयोग होता है उनके शुद्ध रूप का हिंदी में प्रयोग अभीष्ट होने पर ही आ की मात्रा के ऊपर अर्धचंद्र का प्रयोग किया जाए। जहां तक अंग्रेजी और अन्य विदेशी भाषाओं में नए शब्द ग्रहण करने और उनके देवनागरी नियंत्रण का संबंध है अगस्त सितंबर 1962 में वैज्ञानिक तथा तकनीकी शब्दावली आयोग द्वारा वैज्ञानिक शब्दावली पर आयोजित भाषा विद्रोह की संगोष्ठी में अंतर्राष्ट्रीय शब्दावली के देवनागरी लिप्यंतरण के संबंध में सिफारिश उल्लेखनीय है। उसमें यह कहा

गया कि अंग्रेजी शब्दों का देवनागरी लिप्यंतरण इतना क्लिष्ट नहीं होना चाहिए कि उसके लिए वर्तमान देवनागरी वर्णों में अनेक नए संकेत चिन्ह लगाने पड़े। अंग्रेजी शब्दों का देवनागरी लिप्यंतरण मानक अंग्रेजी उच्चारण के अधिक से अधिक निकट होना चाहिए। उसमें भारतीय शिक्षित समाज में प्रचलित उच्चारण संबंधी थोड़े बहुत परिवर्तन किए जा सकते हैं। अन्य भाषाओं के शब्दों के संबंध में यही लागू होना चाहिए।

ग) हिंदी में कुछ शब्द ऐसे हैं जिनके दो-दो रूप बराबर चल रहे हैं। विद्वत समाज में दोनों रूपों की एक सी मान्यता है। फिलहाल इनकी एकरूपता आवश्यक नहीं समझी गई है। कुछ उदाहरण हैं गर्दन गरदन, बरफ बर्फ, बिलकुल बिल्कुल, दोबारा दुबारा।

9. **हल चिन्ह**

संस्कृत मूलक तत्सम शब्दों की वर्तनी में सामान्यतः संस्कृत रूप ही रखा जाए परंतु जिन शब्दों के प्रयोग में हिंदी में हल चिन्ह लुप्त हो चुके हैं उनमें फिर से लगाने का यत्न ना किया जाए जैसे महान, विद्वान आदि के न में।

10. **स्वन परिवर्तन**

संस्कृत मूलक तत्सम शब्दों की वर्तनी को ज्यों का त्यों ग्रहण किया जाए। अतः ब्रह्मा को ब्रह्मा , चिह्न को चिन्ह में बदलना उचित नहीं होगा। जिन तत्सम शब्दों में तीन व्यंजनों के संयोग की स्थिति में एक द्वित्वमुलक व्यंजन लुक हो गया है उसे ना लिखने की छूट है जैसे अर्ध अर्द्ध, उज्ज्वल उज्वल आदि।

11. **विसर्ग**

संस्कृत के जिन शब्दों में विसर्ग का प्रयोग होता है वे यदि तत्सम रूप में प्रयुक्त हो तो विसर्ग का प्रयोग अवश्य किया जाए जैसे दु:खानुभूति मैं यदि उस शब्द के तद्भव रूप में: का लोप हो चुका है तो उसे रूप में: के बिना भी कम चलाया जाएगा जैसे दुख सुख के साथी।

12. **ऐ, औ का प्रयोग**

हिन्दी में ऐ, औ का प्रयोग दो प्रकार की ध्वनियों को व्यक्त करने के लिए होता है। पहले प्रकार की ध्वनियाँ हैं और आदि में हैं तथा दूसरे प्रकार की गवैया कौवा आदि में। इन दोनों ही प्रकार की ध्वनियों को व्यक्त करने के लिए इन्हीं चिन्हों का प्रयोग किया जाए। गव्वया, कव्वा आदि संशोधनों की आवश्यकता नहीं है।

13. **पूर्वकालिक प्रत्यय**

पूर्वकालिक प्रत्यय कर को क्रिया से मिलाकर लिखा जाए जैसे मिलाकर खा-पीकर रो-रो कर आदि

14. **अन्य नियम**

क) शिरोरेखा का प्रयोग प्रचलित रहेगा

ख) पुलिस स्टाफ को छोड़कर शेष विराम चिन्ह वही ग्रहण कर लिए जाएं जो अंग्रेजी में प्रचलित हैं (-, ;,?, :)

ग) पूर्ण विराम के लिए खड़ी पाई का प्रयोग किया जाए

15. **मानक वर्तनी के प्रयोग का उदाहरण**

हिंदी एक विकासशील भाषा है। संघ की राजभाषा घोषित हो जाने के बाद यह शनै शनै अखिल भारतीय रूप ग्रहण कर रही है। अन्य क्षेत्रीय भाषाओं के संपर्क में आकर उनसे बहुत कुछ ग्रहण करके और और अहिंदी भाषियों द्वारा प्रयुक्त होते होते उसका यथा समय एक सर्व सम्मत अखिल भारतीय रूप विकसित होगा ऐसी आशा है।

यद्यपि यह सही है कि विस्तृत भूखंड में और बहुभाषी समाज के बीच व्यवहृत किसी भी विकासशील भाषा के उच्चारण गत गठन में अनेकरूपता मिलना स्वाभाविक है उसे व्याकरण के कठोर नियमों में जकड़ा नहीं जा सकता उसके प्रयोग कर्ताओं को किसी ऐसे शब्द जिसके दो या अधिक समानांतर रूप प्रचलित हो चुके हो एक विशेष रूप में प्रयुक्त करने के लिए बाध्य नहीं किया जा सकता ऐसे शब्द रूपों के बारे में किसी विशेषज्ञ द्वारा निर्णय देने के बाद भी उनकी ग्राह्यता अग्राह्यता के विषय में मतभेद बना ही रहता है फिर भी प्रथम तक कम से कम लेखन टंकण और मुद्रण के क्षेत्र में तो हिंदी भाषा में एकरूपता और मानकीकरण की तत्काल आवश्यकता है। क्या ऐसा करना आज के यह यंत्र आधीन जीवन की अनिवार्यता नहीं है?

भाषा विषयक कठोर नियम बना देने से उनकी स्वीकार्यता तो संदेहास्पद हो ही जाती है, साथ ही भाषा के स्वाभाविक विकास में अवरोध आने का थोड़ा सा डर रहता है। फल लगता है भाषा गतिशील जीवंत और समयारुप नहीं रह पाती। हिंदी वर्णमाला के मानकीकरण में और हिंदी वर्तनी की एकरूपता विषयक नियम निर्धारित करते समय इन सब तथ्यों को ध्यान में रखा गया है और इसीलिए जहां तक बंद पड़ता है उदारता पूर्ण नीति अपनाई गई है।

हिंदी के संख्यावाचक शब्दों की एकरूपता

हिंदी प्रदेशों में संख्यावाचक शब्दों के उच्चारण और लेखन में प्राया एकरूपता का अभाव दिखाई देता है। शिक्षा मंत्रालय द्वारा प्रकाशित बेसिक ग्रामर ऑफ मॉडर्न हिंदी में भी इस एकरूपता का अभाव था। अतः निदेशालय ने 5-6 फरवरी 1980 को आयोजित भाषा विज्ञानियों की बैठक में इस पर गंभीरता से विचार किया गया तदनुसार 1 से 100 तक सभी संख्यावाचक शब्दों पर विचार करने के बाद इनका जो मानक रूप स्वीकृत हुआ वह इस प्रकार है-

१	एक	Ek	1
२	दो	Do	2
३	तीन	Teen	3
४	चार	Char	4
५	पांच	Panch	5
६	छह	Cheh	6
७	सात	Saat	7
८	आठ	Aath	8
९	नौ	Nao	9
१०	दस	Das	10
११	ग्यारह	Gyaarah	11
१२	बारह	Baarah	12
१३	तेरह	Tehrah	13
१४	चौदह	Chaudah	14
१५	पंद्रह	Pandrah	15
१६	सोलह	Saulah	16
१७	सत्रह	Satrah	17
१८	अठारह	Atharah	18
१९	उन्नीस	Unnis	19
२०	बीस	Bees	20

२१	इकीस	Ikis	21
२२	बाईस	Bais	22
२३	तेइस	Teis	23
२४	चौबीस	Chaubis	24
२५	पच्चीस	Pachis	25
२६	छब्बीस	Chabis	26
२७	सताइस	Satais	27
२८	अट्ठाइस	Athais	28
२९	उनतीस	Unatis	29
३०	तीस	Tis	30
३१	इकतीस	Ikatis	31
३२	बतीस	Batis	32
३३	तैंतीस	Tentis	33
३४	चौंतीस	Chautis	34
३५	पैंतीस	Pentis	35
३६	छतीस	Chatis	36
३७	सैंतीस	Setis	37
३८	अड़तीस	Adhtis	38
३९	उनतालीस	Untaalis	39
४०	चालीस	Chalis	40
४१	इकतालीस	Iktalis	41
४२	बयालीस	Byalis	42
४३	तैतालीस	Tetalis	43
४४	चवालीस	Chavalis	44
४५	पैंतालीस	Pentalis	45
४६	छयालिस	Chyalis	46
४७	सैंतालीस	Setalis	47

४८	अड़तालीस	Adtalis	48
४९	उनचास	Unachas	49
५०	पचास	Pachas	50
५१	इक्यावन	Ikyavan	51
५२	बावन	Baavan	52
५३	तिरपन	Tirepan	53
५४	चौवन	Chauvan	54
५५	पचपन	Pachpan	55
५६	छप्पन	Chappan	56
५७	सतावन	Satavan	57
५८	अठावन	Athaavan	58
५९	उनसठ	Unsath	59
६०	साठ	Saath	60
६१	इकसठ	Iksath	61
६२	बासठ	Baasath	62
६३	तिरसठ	Tirsath	63
६४	चौंसठ	Chausath	64
६५	पैंसठ	Pensath	65
६६	छियासठ	Chiyasath	66
६७	सड़सठ	Sadhsath	67
६८	अड़सठ	Asdhsth	68
६९	उनहतर	Unahtar	69
७०	सत्तर	Sattar	70
७१	इकहतर	Ikahtar	71
७२	बहतर	Bahatar	72
७३	तिहतर	Tihatar	73
७४	चौहतर	Chauhatar	74

७५	पचहतर	Pachhatar	75
७६	छिहतर	Chiyahatar	76
७७	सतहतर	Satahatar	77
७८	अठहतर	Adhahatar	78
७९	उन्नासी	Unnasi	79
८०	अस्सी	Assi	80
८१	इक्यासी	Ikyasi	81
८२	बयासी	Byaasi	82
८३	तिरासी	Tirasi	83
८४	चौरासी	Chaurasi	84
८५	पचासी	Pachasi	85
८६	छियासी	Chiyaasi	86
८७	सतासी	Sataasi	87
८८	अट्ठासी	Athasi	88
८९	नवासी	Nauasi	89
९०	नब्बे	Nabbe	90
९१	इक्यानवे	Ikyaanave	91
९२	बानवे	Baanave	92
९३	तिरानवे	Tiranave	93
९४	चौरानवे	Chauraanave	94
९५	पचानवे	Pachaanave	95
९६	छियानवे	Chiyaanave	96
९७	सतानवे	Sataanave	97
९८	अट्ठानवे	Adhaanave	98
९९	निन्यानवे	Ninyaanave	99
१००	एक सौ	Ek sau	100

सरकारी कामकाज में मूल रूप से हिंदी का प्रयोग करने पर नकद पुरस्कार और प्रोत्साहन

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संघ की राजभाषा नीति के अनुसार हिंदी में प्रवीणता प्राप्त तथा हिंदी का कार्य साधक ज्ञान रखने वाले अधिकारियों या कर्मचारियों के लिए अपने सरकारी कामकाज में हिंदी का अधिक से अधिक प्रयोग करना अनिवार्य है। तथापि अधिकारियों तथा कर्मचारियों को हिंदी में अपना अधिक से अधिक सरकारी कामकाज करने के लिए प्रोत्साहन स्वरूप राजभाषा विभाग गृह मंत्रालय तथा रेल मंत्रालय द्वारा अनेक योजनाएं लागू की गई हैं जिनका विवरण इस प्रकार है

1. **मूल रूप से हिंदी में सरकारी कामकाज करने के लिए पुरस्कार-**

इस पुरस्कार योजना में भाग लेने के लिए क तथा ख क्षेत्रों में स्थित केंद्रीय सरकारी कार्यालयों में कार्य करने वाले कर्मचारियों के लिए वर्ष के दौरान अपने सरकारी कामकाज में हिंदी में कम से कम 20000 शब्द तथा ग क्षेत्रों में स्थित केंद्रीय सरकारी कार्यालयों में कार्य करने वाले कर्मचारियों के लिए वर्ष के दौरान अपने सरकारी कामकाज में हिंदी में कम से कम 10000 शब्द लिखना जरूरी है। पुरस्कारों का निर्णय मूल्यांकन समिति द्वारा किया जाता है जिसमें हिंदी में लिखे गए शब्दों की संख्या तथा नोटिंग एंड ड्राफ्टिंग की गुणवत्ता पर विचार किया जाता है। अधीनस्थ कार्यालयों के कर्मचारियों के लिए स्वतंत्र रूप से दिए जाने वाले पुरस्कार -

1) प्रथम पुरस्कार (2) प्रत्येक रुपए 5000

2) द्वितीय पुरस्कार (3) प्रत्येक रुपए 3000

3) तृतीय पुरस्कार (5) प्रत्येक रुपए 2000

2. **स्टेनोग्राफर तथा हिंदी टाइपिस्ट को प्रोत्साहन भत्ता**

अंग्रेजी के अलावा हिंदी में टाइप करने वाले टाइपिस्ट तथा स्टेनोग्राफर को क्रमशः रुपए 240 तथा रुपए 160 प्रति माह की दर से विशेष वेतन दिए जाने का प्रावधान है। किंतु शर्त यह है कि टाइपिस्ट तथा स्टेनोग्राफर प्रतिदिन कम से कम हिंदी में पांच पत्र टाइप करें तथा पांच डिक्टेशन अवश्य लें।

3. **राजभाषा पदक / प्रशस्ति पत्र-**

यह उन वरिष्ठ अधिकारियों को दिया जाता है जो स्वयं अपना अधिक से अधिक काम हिंदी में ही करते बल्कि अपने अधीन कार्य करने वाले अधिकारियों या कर्मचारियों को भी हिंदी में काम करने के लिए प्रोत्साहित करते हैं। यह पदक माननीय रेल मंत्री जी द्वारा दिया जाता है।

महाप्रबंधक एवं उनसे वरिष्ठ अधिकारियों के लिए कमलापति त्रिपाठी राजभाषा स्वर्ण पदक तथा रुपए 5,000 नगद (केवल एक पुरस्कार)

वरिष्ठ प्रशासनिक ग्रेड एवं उच्चतर ग्रेड के अधिकारियों के लिए रेल मंत्री राजभाषा रजत पदक तथा रुपए 4000 नगद पुरस्कार (कुल 30 पुरस्कार)

4. **लाल बहादुर शास्त्री तकनीकी मौलिक पुरस्कार योजना-**

रेल तकनीकी विषयों पर हिंदी में मौलिक लेखन को प्रोत्साहित करने के लिए यह पुरस्कार योजना लागू की गई है। नकद पुरस्कारों के लिए पुरस्कारों का मूल्यांकन समिति द्वारा किया जाता है। स्तरीय पुस्तकों को प्रतिवर्ष निम्नलिखित पुरस्कार दिए जाते हैं-

1) प्रथम पुरस्कार (एक) रुपए 20000

2) द्वितीय पुरस्कार (एक) रुपए 10000

3) तृतीय पुरस्कार (एक) रुपए 7000

5. **प्रेमचंद्र एवं मैथिलीशरण गुप्त पुरस्कार योजना-**

रेल कर्मचारियों की साहित्यिक प्रतिभा और अभिरुचि को प्रोत्साहित करने के उद्देश्य से रेल मंत्रालय की हिंदी में कथा संग्रह उपन्यास और काव्य पुस्तक लेखन पर क्रमशः प्रेमचंद्र और मैथिलीशरण गुप्त पुरस्कार योजनाएं लागू हैं। मौजूदा व्यवस्था के अनुसार इन दोनों योजनाओं के अंतर्गत निम्नानुसार पुरस्कार एवं प्रशस्ति पत्र प्रदान करने की व्यवस्था की गई है

	विधा	पुरस्कार का नाम	पुरस्कार का वितरण	पुरस्कार की राशि
क	कथा/कहानी संग्रह एवं उपन्यास	प्रेमचंद पुरस्कार	1. प्रथम 2. द्वितीय 3. तृतीय	20000 रु 10000 रु 7000 रु
ख	काव्य / ग़ज़ल संग्रह	मैथिलिशरण गुप्त पुरस्कार	1. प्रथम 2. द्वितीय 3. तृतीय	20000 रु 10000 रु 7000 रु

6. **व्यक्तिगत नकद पुरस्कार योजना-**

हिंदी में प्रशंसनीय कार्य करने वालों 134 कर्मचारियों या अधिकारियों को प्रतिवर्ष माननीय मंत्री जी द्वारा अखिल रेल हिंदी सप्ताह के अवसर पर रुपए 3000 की नकद राशि तथा प्रमाण पत्र प्रदान किए जाते हैं।

7. **राजभाषा सामूहिक पुरस्कार योजना-**

हिंदी के प्रयोग प्रसार में उल्लेखनीय कार्य करने वाले निदेशालय विभाग को सामूहिक रूप से 12000/- + आचार्य किशोरी दास चल वैजयंती, 8000/- + रेल मंत्री राजभाषा शील्ड तथा 6000/- + रेल मंत्री राजभाषा ट्रॉफी के क्रमशः प्रथम द्वितीय तथा तृतीय पुरस्कार प्रदान किए जाते हैं। उक्त पुरस्कारों के अंतर्गत प्रथम पुरस्कार प्राप्त करने वाले विभाग के कुल 6 कर्मचारियों को रुपए 2000 द्वितीय पुरस्कार प्राप्त करने वाले विभाग के कुल 5 कर्मचारियों को रुपए 1600 तथा तृतीय पुरस्कार प्राप्त करने वाले कुल 5 कर्मचारियों को रुपए 1200 के पुरस्कार प्रदान किए जाते हैं।

8. **रेल मंत्री हिंदी निबंध प्रतियोगिता-**

रेल कर्मचारियों को रेल संचालन और प्रबंधन संबंधी विषय पर निबंध लेखन के लिए प्रोत्साहित करने के उद्देश्य से प्रतिवर्ष रेल मंत्री हिंदी निबंध प्रतियोगिता का आयोजन किया जाता है।

रेलवे बोर्ड कार्यालय में प्राप्त निबंध का मूल्यांकन करने के पश्चात पुरस्कृत लेखकों को माननीय मंत्री जी द्वारा रेल सप्ताह के अवसर पर पुरस्कार प्रदान किया जाता है। इस योजना के अंतर्गत राजपत्रित तथा अराजपत्रित श्रेणियों में प्रत्येक के लिए अलग-अलग पुरस्कार निर्धारित हैं-

1) प्रथम पुरस्कार (दो) रुपए 6000

2) द्वितीय पुरस्कार (दो) रुपए 4000

9. **अखिल रेल हिन्दी निबंध एवं वाक् प्रतियोगिता**

यह प्रतियोगिता प्रतिवर्ष रेलवे बोर्ड द्वारा आयोजित की जाती है। इस योजना के अंतर्गत रुपए 5000 के प्रथम पुरस्कार रुपए 4000 के द्वितीय पुरस्कार और रुपए 3000 के तृतीय पुरस्कार तथा रुपए 2000 के 5-5 सांत्वना पुरस्कार देने के प्रावधान हैं।

10. **अखिल रेल हिंदी टिप्पण एवं प्रारूप लेखन प्रतियोगिता-**

यह प्रतियोगिता प्रतिवर्ष रेलवे बोर्ड द्वारा आयोजित की जाती है। इस योजना के अंतर्गत रुपए 5000 के प्रथम पुरस्कार रुपए 4000 के द्वितीय पुरस्कार और रुपए 3000 के तृतीय पुरस्कार तथा रुपए 2000 के 5-5 सांत्वना पुरस्कार देने के प्रावधान है।

11. **अधिकारियों को हिंदी में अधिकाधिक डिक्टेशन देने के लिए प्रोत्साहन करने हेतु पुरस्कार योजना-**

अधिकारियों को हिंदी में अधिकाधिक डिक्टेशन देने के लिए प्रोत्साहित करने हेतु यह पुरस्कार योजना लागू की गई है। इस योजना के अंतर्गत प्रतिवर्ष प्रत्येक कार्यालय से एक हिंदी भाषा और एक अहिंदी भाषा रेल अधिकारी को 5000-5000 रु नकद पुरस्कार दिए जाते हैं। हिंदी डिक्टेशन कार्य की न्यूनतम सीमा निर्धारित है अर्थात केवल वे अधिकारी इस पुरस्कार के पात्र होते हैं जो क तथा ख क्षेत्र में वर्ष में कम से कम 20000 शब्द हिंदी डिक्टेशन देते हैं। अहिंदी भाषी अधिकारियों के लिए शब्द सीमा 10000 शब्द प्रति वर्ष है।

12. **रेल यात्रा वृतांत लिखने पर पुरस्कार योजना**

रेलवे बोर्ड में अखिल स्तर पर रेल यात्रा वृतांत योजना वर्ष 2000-2001 से प्रारंभ की है। इस योजना के अंतर्गत प्रत्येक कैलेंडर वर्ष में पाए गए सर्वोत्तम यात्रा वृतांत के विजेता व्यक्तियों को निम्नानुसार नकद पुरस्कार दिए जाएंगे प्रथम रुपए 10000 द्वितीय रुपए 8000 तृतीय रुपए 6000 तथा प्रेरणा पुरस्कार रुपए 4000। इसमें रेलवे के बाहर के लोग भी भाग ले सकते हैं। यात्रा वृतांत डबल स्पेस में टाइप होना चाहिए। कम से कम 3000 शब्दों में होना चाहिए। शीर्षक उपशीर्षक एवं लेखक का नाम पदनाम आयु पता कार्यालय का पता तथा मात्रिभाषा भी लिखी होनी चाहिए। निबंध दो प्रतियों में भेजना चाहिए।







वयं राष्ट्रे जागृयाम

भारतीय रेल परिवहन प्रबंधन संस्थान
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