

Signal and Telecommunication Department

(Organisation, Function and Duties)

The S&T Organization of Western Railway is headed by Chief Signal & Telecommunication Engineer (CSTE) who is assisted by Chief Signal Engineer, Chief Communication Engineer, Chief Signal & Telecommunication Engineer (Planning) and Chief Signal & Telecommunication Engineer (Works).

The Signalling Department is responsible for Safe Train operations and maximum utilization of fixed and moving assets such as train rakes, locos and tracks etc. and Telecommunication Department provides communication facility for safe operation of train movements, internal communication network and passenger amenities items pertaining to provision of information to passengers by Passenger information system viz Public Address System, Train Indicator System, Coach Guidance System etc.

Role of Signal and Telecommunication Department

- To ensure safety in train operation.
- To provide administrative voice and data circuits.
- Provision of Data circuit for Passenger reservation system , Unreserved ticketing system , Freight operation & information system and Crew Management system
- Provision of passenger information system viz Coaching information system ,Train Indicator system, Public Address System, Surveillance system based on Close Circuit Television System etc.

BRIEF DESCRIPTION OF SIGNALLING SYSTEM OVER WESTERN RAILWAY.

Signalling system over Western Railway is a combination of modern signalling system comprising of most advanced interlocking system viz. Electronic interlocking, Relay Interlocking (Route Setting type), Relay Interlocking (Non Route Setting type), Automatic Signalling System, Auxiliary Warning System, Mechanical Signalling. and orthodox signalling .

Salient features of Signalling system provided over Western Railway as on 31/102015 are as under:

- 526 stations over Western Railway are interlocked, out of which Multi Aspect Colour Light Signalling with relay interlocking(Route setting type) are at 38 stations, Multi Aspect Colour Light Signalling with relay interlocking (Non route setting type) are at 323 stations, Electronic interlocking(EI) are at 56 stations and Mechanical signalling are at 109 stations.
- 495 Rkm between Churchgate-Ahmedabad section is equipped with Automatic Signalling System.
- 60 Rkm between Churchgate- Virar section is equipped with Auxiliary Warning System (AWS).
- Out of 1802 LC gates (BG + MG), 965 LC gages are interlocked and 1770 gates are equipped with Telephone Communication with Station Master.
- Train Management System (TMS) for controlling suburban train services between Churchgate-Virar (60 Rkm).

BRIEF DESCRIPTION OF TELECOM SYSTEM OVER WESTERN RAILWAY.

The telecommunications facilities provided on this railway is broadly categorized in four areas of applications.

(A)ADMINISTRATIVE COMMUNICATION FACILITIES

- (i) Telephone Exchanges for Internal Communication
- (ii) Data Communication Network for Administrative use (Railnet) Computerised Passenger Reservation System (PRS), Un-reserved Ticketing System (UTS), Freight Operation and Information System (FOIS).

(B)OPERATIONL COMMUNICATION FACILITIES

- (i) Telecommunication for train operation viz. Section Control Circuit, Deputy Control Circuit, Emergency Control Circuit, Remote Control Circuit, etc.
- (ii) Mobile Train Radio Communication System between Churchgate – Virar.
- (iii) Guard Driver communication system over entire Western Railway.

- (iv) Data Communication Network for Freight Operation and Information System (FOIS).
- (v) Data Communication Network for Computerised Passenger Reservation System (PRS)/Un-reserved Ticketing System (UTS), (Unified Ticketing Network – UTN)

(C) PASSANGER INFORMATION SYSTEM

- (i) Public Address System
- (ii) Coach Guidance system,
- (iii) Train Indicator System,
- (iv) Clocks,

(D) SURVAILANCE SYSTEM

- (i) Monitoring of stations and circulating area by means of Close Circuit Television System.

Salient features of Telecommunication system provided over Western Railway as on 31/10/2015 are as under:

- Optical Fibre Network : 4094 Rkm.
- Underground Cable Network : 4618 Rkm.
- MW / UHF Network : 1480 Rkm.
- Un-reserved Ticketing system (UTS) : 510 Stations
- Passenger Reservation system (PRS) : 261 Locations
- Freight Operation and Information System (FOIS) : 213 Locations.
- Public Address System :183 Stations.
- Train Arrival / Departure Display Board : 97 Stations.
- Coach Guidance System : 57 Stations.
- CCTV System : 55 Stations.
- Telephone Exchanges : 88 Nos.
- Mobile Train Radio Communication System : 60 Rkm.
