

MODERNISATION OF RAILWAY SIGNALLING SYSTEMS

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Ministry of Railways

Modernisation of Railway Signalling Systems

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Signalling System enhances safety in train operations. Upgradation and replacement of equipments in use over Indian Railways is a continuous process and is undertaken based on its condition, operational needs and availability of resources.

In order to further improve safety in train operation and generate additional line capacity, modernisation of Signalling System has been taken in hand. Following major steps have been taken,

- i. 6084 (96% of total Stations) Stations on Indian Railway have been equipped with modern Electrical/Electronic Signalling Interlocking System up to 29.02.2020.
- ii. Electronic Interlocking are being adopted on a large scale to derive benefits of digital technologies in train operation and to enhance safety. So far 1913 stations have been provided with Electronic Interlocking upto 29.02.2020.
- iii. Axle Counters for Automatic clearance of Block Section (BPAC) are provided to ensure complete arrival of train without manual intervention before granting line clear to receive next train and to reduce human element. These systems have been provided on 5661 block sections upto 29.02.2020.
- iv. In order to increase line capacity to run more trains on existing High Density Routes of Indian Railways, Automatic Block Signaling is a cost effective solution. As on 29.02.2020, Automatic Block Signaling has been provided on 3207 Route km.
- v. Enhancing Safety at Level Crossing Gates has been a major area of concern. Safety gets enhanced by interlocking level crossings with Signals. Indian Railways have provided interlocking with Signals at 11622 Level Crossing Gates to enhance the safety at Level Crossings as on 29.02.2020.

Modernisation of Signalling System is proposed to be taken up on High Density Routes of Indian Railways including Golden Quadrilateral (GQ) and Golden Diagonal

(GD) Route. The work includes provision of Modern Train Control System.

- As a prelude to modernisation work of signalling system on Indian Railways, four works totaling 640 Route km at total cost of 1,609 crores have been sanctioned in Supplementary Works Programme 2018-19 in following sections for extensive trials,

SN	Section	Railway
1	Nagpur – Badnera	Central Railway
2	Renigunta -Yerraguntala	South Central Railway
3	Vizianagaram - Palasa	East Coast Railway
4	Bina - Jhansi	North Central Railway

Tenders for the works have since been opened and are under evaluation.

- Two works of Raising of speed to 160kmph on existing New Delhi – Howrah and New Delhi – Mumbai routes have been sanctioned including modernisation of Signalling and detailed estimates are under preparation.

- An indigenous Automatic Train Protection (ATP) System namely Train Collision Avoidance System (TCAS), has been developed by Indian Railways in association with Indian manufacturers. The system has been installed on Lingampalli – Vikarabad – Wadi & Vikarabad - Bidar section (250 Route km) of South Central Railway.

Further contract have been awarded for Train Collision Avoidance System (TCAS) works on additional 1199 Route km on South Central Railway.

- Works for implementation of Centralized Traffic Control (CTC) System to improve line capacity and efficient management of train operations from a central location covering large sections, have also been taken up.

The CTC at Tundla is operational covering 26 stations and 250 Route Km on Aligarh-Kanpur section.

Works for 12 CTCs have also been sanctioned on 8 Zonal Railways (Eastern Railway, Central Railway, Northern Railway, North Central Railway, South Eastern Railway, South East Central Railway, Southern Railway and Western Railway) covering 1829 Route Km.

- Train Management System (TMS) on suburban section in Howrah Division of Eastern Railway has been commissioned on 15.11.2019 duly integrating with Control

Office Application (COA) for real time train running information and chartings. It covers 22 stations over 74 Route km.

TMS work on Khurda Road Division of East Coast Railway is in progress. It covers 864 Route km with 104 stations on entire Divisions.

A work of provision of TMS for Delhi area has been sanctioned at a cost of Rs 71 CR in the works programme 2019-20.

This press release is based on information given by the Minister of Railways and Commerce & Industry, Shri Piyush Goyal in a written reply to a question in Rajya Sabha today.

SG

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