

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS**

**LOK SABHA
UNSTARRED QUESTION NO.484
TO BE ANSWERED ON 05.02.2020**

SIGNALLNG SYSTEM

**484. DR. SUBHASH RAMRAO BHAMRE:
SHRI SUNIL DATTATRAY TATKARE:
DR. DNV SENTHILKUMAR S:
SHRI SHYAM SINGH YADAV:**

Will the Minister of RAILWAYS be pleased to state:

(a) whether the outdated signalling system is one of the major causes of train accidents;

(b) if so, the steps taken by the Railways to modernize the signalling system in Railways, zone -wise;

(c) whether the Indian Railways is set to receive modern signalling systems to improve safety, line capacity allowing trains to run at high speed;

(d) if so, the details of the cost of implementation of the programme;

(e) the routes identified where this modernization work is to be implemented along with the nodal agency responsible to implement this programme;

(f) the details of major innovations implemented or introduced in the last three years to improve the signalling system at par with the advanced railway system across the world; and

(g) the other steps taken by the Government for strengthening signalling and telecom mechanism to control the increasing traffic on rail tracks?

ANSWER

MINISTER OF RAILWAYS AND COMMERCE & INDUSTRY

(SHRI PIYUSH GOYAL)

(a) and (b) No, Sir. Signalling System enhances safety in train operations.

Updation and replacement of equipments in use, over Indian Railways is a continuous process and are 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, modernization of Signalling System has been taken in hand. Following major steps have been taken.

- (i) 6010 (96% of total stations) Stations on Indian Railway have already been equipped with modern Electrical/Electronic Signalling Interlocking System.**
- (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 1814 stations have been provided with Electronic Interlocking upto 31.12.2019.**
- (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 5563 block sections upto 31.12.2019.**
- (iv) In order to increase line capacity to run more trains & lower per unit cost of train operations on existing High Density Routes of Indian Railways, Automatic Block Signaling is a cost effective solution. As on 31.12.2019, Automatic Block Signaling has been provided on 3181 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 11552 Level Crossing Gates to enhance the safety at Level Crossings as on 31.12.2019.**

(c) to (e) Yes, Sir. Modernization 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 modernization, 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. M/s RailTel is the nodal agency for executing the work.

Two works of Raising of speed to 160kmph on existing New Delhi – Howrah and New Delhi – Mumbai routes have been sanctioned including modernization of Signalling. Detailed estimates are being prepared by concerned nodal railways (Western Railway for Delhi – Mumbai route and North Central Railway for Delhi – Howrah route).

(f) 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 works on additional 1199 Route km on South Central Railway are also in progress. The System shall provide protection against Signal Passed at Danger (SPAD).

(g) Works for implementation of Centralised 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.
