

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

RAJYA SABHA
UNSTARRED QUESTION NO. 315
ANSWERED ON 21.07.2023

SIGNAL FAILURE

315. DR. SANTANU SEN:

Will the Minister of RAILWAYS be pleased to state:

- (a) whether Government has data on incidents that have happened due to signal failure in the past 5 years, if so, the details thereof;
- (b) the steps taken by Government in the past 5 years to prevent human error in the electronic interlocking system currently in place;
- (c) whether Kavach, the state-of-the-art electronic system could have prevented such incidents; and
- (d) if not, what other measures are being planned to be implemented to address such issues?

ANSWER

MINISTER OF RAILWAYS, COMMUNICATIONS AND
ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

- (a) In last five year there have been 13 incidences on signalling account. The details are :

Year	Incidences	Out of which consequential accidents	Out of which Deaths
2018-19	3	3	0
2019-20	4	2	0
2020-21	0	0	0
2021-22	1	1	0
2022-23	5	1	0

- (b) The various steps taken to prevent human error in last five years:
1. Issue of standard typical circuits for Electronic Interlocking (EI) system (Version-1 in 2019 and Version-2 in 2022): Adoption of standard typical circuits helps in standardization of application logic circuits of EI over Indian Railways.

2. Generation of Route Control Chart (RCC) through Automation tool which will help in standardization.
 3. Development of direct driving feature in Electronic Interlocking.
- (c) Kavach is an Automatic Train protection system which is an aid to Loco Pilot in train running within specified speed limits, by automatic application of Brakes in case the Loco Pilot fails to do so. It also applies brake in case a Loco Pilot fails to apply brakes at Red Signal.
- (d) The various measures, other than (b) above, taken to address such issues are:
1. Counselling the staff for following the protocol for any wiring alteration works involving changes in existing signalling system. All such works as per protocol to carried out during traffic Blocks / Non Interlocking of the station.
 2. Concept of Rolling Block introduced wherein work of maintenance/repair/replacement is planned for 2 weeks in advance on rolling basis and executed as per plan.
 3. Intensive Safety drive for verification of all relay room and outdoor location particulars for correctness with site and drawings is under progress over and above the regular safety Inspections.
 4. Indian Railways is in continuous process of upgrading its signalling system from Mechanical to Electro – mechanical to Electronic Interlocking.
