### GOVERNMENT OF INDIA MINISTRY OF RAILWAYS

## RAJYA SABHA UNSTARRED QUESTION NO. 2680 ANSWERED ON 11.08.2023

# INVESTIGATION REPORTS OF RAIL ACCIDENTS AND CORRECTIVE MEASURES

### 2680 # SHRI RAM NATH THAKUR:

Will the Minister of RAILWAYS be pleased to state:

- (a) the details of rail accidents in the last decade, zone-wise;
- (b) the investigation reports regarding which railway accidents have been received so far;
- (c) the details of the corrective steps taken by the Railways in the light of the inspection report;
- (d) the cause of Balasore train accident and the number of people who died in this accident; and
- (e) the details of the assistance given to the dependents of those killed in the accident?

# ANSWER

# MINISTER OF RAILWAYS, COMMUNICATIONS AND ELECTRONICS & INFORMATION TECHNOLOGY

# (SHRI ASHWINI VAISHNAW)

(a) to (e): A Statement is laid on the Table of the House.

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### **STATEMENT** REFERRED TO IN REPLY TO PARTS (a) TO (e) OF UNSTARRED QUESTION NO. 2680 BY SHRI RAM NATH THAKUR ANSWERED IN RAJYA SABHA ON 11.08.2023 REGARDING INVESTIGATION REPORTS OF RAIL ACCIDENTS AND CORRECTIVE MEASURES

(a): Zone-wise details of the number of consequential train accidents during the last 10 years

i.e. from 2013-14 to 2022-23, are given below:

Zonal Railway	Number of consequential train accidents
	during the period 2013-14 to 2022-23
Central Railway	68
Eastern Railway	30
East Central Railway	91
East Coast Railway	42
Konkan Railway	11
North Central Railway	45
North Eastern Railway	44
Northeast Frontier Railway	37
North Western Railway	57
Northern Railway	119
South Central Railway	27
South Eastern Railway	35
South East Central Railway	24
South Western Railway	35
Southern Railway	30
West Central Railway	14
Western Railway	46
Metro Kolkata	01
Total	756

The trend of consequential train accidents from 2000-01 to 2022-23 is given below :-



It may be noted from the graph above, that there is a steep decline in the number of consequential train accidents from 473 in 2000-01 to 48 in 2022-23.

The average number of consequential train accidents during the period, 2004-14 was 171 per annum, while the average number of consequential train accidents during the period, 2014-23 has declined to 71 per annum.

(b) & (c): The Railway Accidents are inquired by the Departmental Inquiry Committees and the statutory body, the Commissioner of Railway Safety (CRS) under Ministry of Civil Aviation. During the last ten years (i.e. from 2013-14 to 2022-23), 690 accident cases were investigated by the Departmental Inquiry Committees and 66 cases have been investigated by the CRS or the Departmental Inquiry Committees are examined and corrective steps are taken by the Zonal Railways accordingly.

The safety measures taken recently to avoid train accidents include the following:

- Rashtriya Rail Sanraksha Kosh (RRSK) has been introduced in 2017-18 for replacement/renewal/upgradation of critical safety assets, with a corpus of Rs. 1 lakh crore for five years. From 2017-18 till 2021-22 a gross expenditure of Rs. 1.08 lakh crore was incurred on RRSK works.
- 2. Electrical/Electronic Interlocking Systems with centralized operation of points and signals have been provided at 6427 stations upto 31.05.2023 to eliminate accident due to human failure.
- 3. Interlocking of Level Crossing (LC) Gates has been provided at 11093 level Crossing Gates up to 31.05.2023 for enhancing safety at LC gates.
- 4. Complete Track Circuiting of stations to enhance safety for verification of track occupancy by electrical means has been provided at 6377 stations upto 31.05.2023.
- 5. Detailed instructions on issues related with safety of signalling e.g. mandatory correspondence check, alteration work protocol, preparation of completion drawing, etc. have been issued.
- System of disconnection and reconnection for S&T equipment as per protocol has been reemphasized.
- All locomotives are equipped with Vigilance Control Devices (VCD) to ensure alertness of Loco Pilots.
- 8. Retro-reflective sigma boards are provided on the mast which is located two OHE masts prior to the signals in electrified territories to warn the crew about the signal ahead when visibility is low due to foggy weather.
- 9. A GPS based Fog Safety Device (FSD) is provided to loco pilots in fog affected areas which enables loco pilots to know the distance of the approaching landmarks like signals, level crossing gates etc.

- 10. Modern track structure consisting of 60kg, 90 Ultimate Tensile Strength (UTS) rails, Prestressed Concrete Sleeper (PSC) Normal/Wide base sleepers with elastic fastening, fanshaped layout turnout on PSC sleepers, Steel Channel/H-beam Sleepers on girder bridges is used while carrying out primary track renewals.
- 11. Mechanisation of track laying activity through use of track machines like PQRS, TRT, T-28 etc to reduce human errors.
- 12. Maximizing supply of 130m/260m long rail panels for increasing progress of rail renewal and avoiding welding of joints, thereby ensuring safety.
- 13. Laying of longer rails, minimizing the use of Alumino Thermic Welding and adoption of better welding technology for rails i.e. Flash Butt Welding.
- 14. Monitoring of track geometry by OMS (Oscillation Monitoring System) and TRC (Track Recording Cars).
- 15. Patrolling of railway tracks to look out for weld/rail fractures.
- 16. The use of Thick Web Switches and Weldable CMS Crossing in turnout renewal works.
- 17. Inspections at regular intervals are carried out to monitor and educate staff for observance of safe practices.
- 18. Web based online monitoring system of track assets viz. track database and decision support system has been adopted to decide rationalized maintenance requirement and optimize inputs.
- 19. Detailed instructions on issues related with safety of track e.g. integrated block, corridor block, worksite safety, monsoon precautions etc. have been issued.
- 20. Preventive maintenance of railway assets (Coaches & Wagons) is undertaken to ensure safe train operations and to keep a check on rail accidents across the country.
- 21. Replacement of conventional ICF design coaches with LHB design coaches is being done.
- 22. All unmanned level crossings (UMLCs) on Broad Gauge (BG) route have been eliminated by January 2019.
- 23. Safety of railway bridges is ensured through regular inspection of bridges. The requirement of repair/rehabilitation of bridges is taken up based upon the conditions assessed during these inspections.
- 24. Indian Railways has displayed statutory "Fire Notices" for widespread passenger information in all coaches. Fire posters are provided in every coach so as to inform and alert passengers regarding various Do's and Don'ts to prevent fire. These include messages regarding not carrying any inflammable material, explosives, prohibition of smoking inside the coaches, penalties etc.
- 25. Production Units are providing fire detection and suppression system in newly manufactured power cars and pantry cars and fire and smoke detection system in newly manufactured coaches. Progressive fitment of the same in existing coaches is also underway by Zonal Railways in a phased manner.

- 26. Regular counselling and training of staff is undertaken.
- 27. Concept of Rolling Block system introduced wherein work of maintenance/repair/replacement is planned for 2 weeks in advance on rolling basis and executed as per plan.

(d): In case of Balasore Train Accident, the CRS has submitted the final inquiry report. The Cause of the accident has been established by CRS as under:

The rear-collision was due to the lapses in the signalling- circuit-alteration carried out at the North Signal Goomty (of the station) in the past, and during the execution of the signalling work related to replacement of Electric Lifting Barrier for level crossing gate no. 94 at the Station. These lapses resulted in wrong signalling to the Train No. 12841 wherein the UP Home Signal indicated Green aspect for run-through movement on the UP main line of the station, but the crossover connecting the UP main line to the UP loop line (crossover 17 A/B) was set to the UP loop line; the wrong signalling resulted in the Train No. 12841 traversing on the UP loop line, and eventual rear-collision with the Goods train (No. N/DDIP) standing there.

In the unfortunate Balasore train accident, 296 persons had lost their lives.

(e) In the unfortunate Balasore train accident, payment of enhanced ex-gratia @ Rs. 10 lakh each to the next of kin of the deceased has been announced. An amount of Rs. 25.20 Crores has been paid as ex-gratia till 03<sup>rd</sup> August, 2023. Railways also pay compensation to the next of kin of deceased or victims depending upon nature and type of injuries sustained. Compensation is paid by the Railways as per decree passed by Railway Claim Tribunal (RCT) on the compensation claims filed by the victims or their dependents. An amount of Rs. 2.49 Crores has been paid as compensation till 04<sup>th</sup> August, 2023.

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