

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

RAJYA SABHA
UNSTARRED QUESTION NO. 576
ANSWERED ON 29.11.2024

SAFETY IN RAILWAYS

576. DR. V. SIVADASAN:

Will the Minister of RAILWAYS be pleased to state:

- (a) the total length of tracks on which Kavach has been installed, details year-wise since 2019;
- (b) the number of vacant positions in track maintenance, track fitness, senior and junior section engineers, gangman and technicians in the safety category, category wise, details since 2019; and
- (c) by when Kavach installation is expected to be completed?

ANSWER

MINISTER OF RAILWAYS, INFORMATION & BROADCASTING AND
ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

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

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO. 576 BY DR. V. SIVADASAN ANSWERED IN RAJYA SABHA ON 29.11.2024 REGARDING SAFETY IN RAILWAYS.

(a) & (c):

1. Kavach is an indigenously developed Automatic Train Protection (ATP) system. Kavach is a highly technology intensive system, which requires safety certification of highest order (SIL-4).
2. Kavach aids the Loco Pilot in running of train within specified speed limits by automatic application of brakes in case Loco Pilot fails to do so and also helps the trains to run safely during inclement weather.
3. The first field trials on the passenger trains were started in February 2016. Based on the experience gained and Independent Safety Assessment of the system by Independent Safety Assessor (ISA), three firms were approved in 2018-19, for supply of Kavach Ver 3.2.
4. Kavach was adopted as National ATP system in July 2020.
5. Implementation of Kavach System involves following Key Activities:
 - a. Installation of Station Kavach at each and every station, block section.
 - b. Installation of RFID Tags throughout the track length.
 - c. Installation of telecom Towers throughout the section.
 - d. Laying of Optical Fibre Cable along the track.
 - e. Provision of Loco Kavach on each and every Locomotive running on Indian Railways.
6. Based on deployment of Kavach version 3.2 on 1465 RKm on south central Railway, lot of experience was gained. Using that further improvements were made. Finally, Kavach specification version 4.0 was approved by RDSO on 16.07.2024.
7. Kavach version 4.0 covers all the major features required for the diverse railway network. This is a significant milestone in safety for Indian Railways. Within a short period, IR has developed, tested and started deploying Automatic Train Protection System.
8. Major improvement in Version 4.0 includes increased Location Accuracy, Improved Information of Signal Aspects in bigger yard, Station to Station Kavach interface on OFC and Direct Interface to existing Electronic Interlocking System. With these improvements, Kavach Ver.4.0. is planned for large scale deployment over Indian Railways.

9. Progress of Key items comprising Kavach system on Indian Railways upto Oct' 2024 is as under: -

SN.	Items	Progress
i	Laying of Optical Fibre Cable	5116 Km
ii	Installation of Telecom Towers	538 Nos.
iii	Provision of Kavach at Stations	521Nos.
iv	Provision of Kavach in Loco	687 Locos
v	Installation of Track side equipment	3413 Rkm

10. Next phase of Kavach implementation is planned as under:-

- a. Project for equipping 10,000 Locomotives has been finalized.
- b. Bids for track side Works of Kavach for approximately 15000 Rkm have been invited.
It covers all GQ, GD, HDN and Identified sections of Indian Railways.

11. Currently, 3 OEMs are approved for supply of Kavach System. To increase capacity and scale of implementation, trials and approval of more OEMs are at different stages.

12. Specialized training programme on Kavach are being conducted at centralized training institutes of Indian Railways to impart training to all concerned officials. By now more than 9000 technicians, operators and engineers have been trained on Kavach technology. Courses have been designed in collaboration with IRISSET.

13. The cost for provision of Track Side including Station equipment of Kavach is approximately Rs. 50 Lakhs/Km and cost for provision of Kavach equipment on locomotives is approximately Rs. 80 Lakh/Loco.

14. The funds utilized on Kavach works so far is Rs. 1547 Crores. The allocation of funds during the year 2024-25 is Rs. 1112.57 Crores. Requisite funds are made available as per the progress of works.

- (b): Occurrence and filling up of vacancies are continuous process on Indian Railways considering its size, spatial distribution and criticality of operation. Adequate and suitable manpower is provided to cater to the regular operations, changes in technology, mechanizations and innovative practices. The vacancies are filled up primarily by placement of indents by Railways with Recruitment agencies as per operational and technological requirements.

After easing of restrictions imposed on account of COVID 19, two major examinations involving more than 2.37 crore candidates have been conducted successfully.

Exam	Candidates	Cities	Centres	Days	Shifts
L2 - L6	1.26 cr	211	726	68	133
L-1	1.1 cr	191	551	33	99

Based on these exams, 1,30,581 candidates have been recruited in railways.

The RRB examinations are quite technical in nature entailing large scale mobilization of men and resources and training of manpower. Railway overcame all these challenges and successfully conducted the recruitment in a transparent manner following all laid down guidelines. No instance of paper leakage or similar malpractice has occurred during the entire process.

Recruitment done in Indian Railways during 2004-2014 vis-à-vis during 2014 – 2024 is given as under.

Period	Recruitments
2004-14	4.11 lakh
2014-24	5.02 lakh

Further, as system improvement, the Ministry of Railways has introduced a system of publishing annual calendar from 2024 for recruitment to various categories of Group ‘C’ posts. The introduction of annual calendar will benefit the aspirants in the following manner:

- More opportunities for candidates;
- Opportunities to those becoming eligible every year;
- Certainty of exams;
- Faster Recruitment process, Training and Appointments

Accordingly, Eight Centralized Notifications (CENs) for 58,642 vacancies have been notified during January to October 2024 for filling up of posts of Assistant Loco Pilots, Technicians, Sub-Inspectors & Constables in Railway Protection Force (RPF), Junior Engineers/Depot Material Superintendents/Chemical & Metallurgical Assistants, Paramedical Categories, Non-Technical Popular Categories (Graduates) & Non-Technical Popular Categories (Under-Graduates).

The Computer Based Test is scheduled from 25.11.2024 onwards.