

**GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS**

**LOK SABHA  
UNSTARRED QUESTION NO. 399  
TO BE ANSWERED ON 24.07.2024**

**OBJECTIVES OF KAVACH ON TRAIN**

**399. SHRI PRABHAKAR REDDY VEMIREDDY:**

**Will the Minister of RAILWAYS be pleased to state:**

- (a) the aims and objectives of Kavach to prevent collision of trains;**
- (b) the details of potential hazards/possibilities from which Kavach protects trains and safety Integrity Level-4 that Kavach is equipped with;**
- (c) whether it is true that Kavach anti-collision technology is the cheapest in the world costing just Rs. 50 lakhs per kms when compared to around Rs. 2 crore per kms worldwide, if so, the details thereof;**
- (d) the efforts being made to further bring down costing from Rs. 50 lakhs/km;**
- (e) whether there are any plans to sell Kavach technology to other countries to earn money and the same can be used in expanding Kavach in all routes; and**
- (f) If, so, the details thereof and if not, the reasons therefor?**

**ANSWER**

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

**(SHRI ASHWINI VAISHNAW)**

**(a) to (f):**

- 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.**

- 2. Kavach aids the loco pilot in train running within specified speed limits by automatic application of brakes in case Loco Pilot fails to do so and also helps the train to run safely during inclement weather.**
- 3. Kavach system is certified for Safety Integrity Level-4.**
- 4. Further, Kavach reduces the probability of train collisions in block sections and on running lines at stations through its non-SIL features.**
- 5. On 16.07.2024, Kavach 4.0 specification has been approved by RDSO. This version 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.**
- 6. To increase capacity and scale up implementation, trials of more OEMs are at difference stages.**
- 7. India is one of the few countries world over who have developed their own train protection technology.**
- 8. Kavach has been certified for highest level of Safety Integrity Level-SIL4 by Independent Safety Assessor. With this, Kavach has potential for adoption by other countries.**

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