

**GOVERNMENT OF INDIA  
MINISTRY OF RAILWAYS**

**LOK SABHA**

**UNSTARRED QUESTION NO. 170**

**TO BE ANSWERED ON 07.12.2022**

**TRAIN COLLISION AVOIDANCE SYSTEM**

**170. SHRI A. RAJA:**

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

- (a) the number of Vande Bharat Express trains running in the country;**
- (b) whether the Vande Bharat Express 2.0 is equipped with safety features like Train Collision Avoidance System, quick start and state-of-the art features, if so, the details thereof;**
- (c) whether other long distance express trains, especially bound for South, are also likely to be equipped with Anti-collision device, high speed, etc.; and**
- (d) if so, the time by which it is likely to be implemented?**

**ANSWER**

**MINISTER OF RAILWAYS, COMMUNICATIONS AND  
ELECTRONICS & INFORMATION TECHNOLOGY  
(SHRI ASHWINI VAISHNAW)**

**(a) At present, 05 pairs of Vande Bharat Express trains namely 22435/22436 New Delhi-Varanasi Vande Bharat Express, 22439/22440 New Delhi-Shri Mata Vaishno Devi Katra Vande Bharat Express, 20901/20902 Mumbai Central – Gandhinagar Capital Vande Bharat Express, 22447/22448 New Delhi – Amb Andaura Vande Bharat Express and 20607/20608 Chennai Central- Mysuru Vande Bharat Express are in operation over the Indian Railways network.**

**(b) to (d) Yes, Sir. Vande Bharat Express 2.0 is provided with “KAVACH” [Train Collision Avoidance System (TCAS)]. It also has high starting acceleration of 0.7 m/s<sup>2</sup>. The train has state- of- art Insulated Gate Bi-polar Transistor (IGBT) based 3-phase propulsion system in distributed power mode for fast acceleration. So far, “Kavach” has been deployed for 1,455 Route Kms on South Central Railway with 77 number of locomotives. Currently, Kavach work is in progress on Delhi-Mumbai & Delhi – Howrah corridors. Besides, deployment of “Kavach” is an on-going process.**

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