

**GOVERNMENT OF INDIA
RAILWAYS
LOK SABHA**

UNSTARRED QUESTION NO:3141

ANSWERED ON:12.08.2010

TECHNOLOGY INTENSIVE MEASURES

Antony Shri Anto;Kataria Shri Lal Chand;Kumar Shri Vishwa Mohan;Pandey Shri Ravindra Kumar;Premajibhai Dr. Solanki Kiritbhai;Singh Shri Rakesh;Thamaraiselvan Shri R.;Yadav Shri Dinesh Chandra;Yadav Shri Om Prakash

Will the Minister of RAILWAYS be pleased to state:

- (a) the details of technology intensive measures adopted by the Railways to prevent train accidents;
- (b) whether pilot projects are underway regarding such measures;
- (c) if so, the details thereof and the further steps taken/being taken to extend such initiatives to all zones of the country; and
- (d) the estimated cost likely to be incurred by the Railways in this regard?

Answer

MINISTER OF THE STATE IN THE MINISTRY OF RAILWAYS (SHRI K.H. MUNIYAPPA)

(a) to (d): A Statement is attached.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF THE UNSTARRED QUESTION NO. 3141 BY SHRI RAKESH SINGH, SHRI ANTO ANTONY, SHRI RAVINDRA KUMAR PANDEY, SHRI VISHWA MOHAN KUMAR, SHRI DINESH CHANDRA YADAV, SHRI OM PRAKASH YADAV SHRI R. THAMARAISELVAN, DR. KIRIT PREMJBHAI SOLANKI AND SHRI LALCHAND KATARIA TO BE ANSWERED IN LOK SABHA ON 12.08.2010 REGARDING TECHNOLOGY INTENSIVE MEASURES.

(a): Technology intensive measures adopted to prevent accidents include provision of Auxiliary Warning System, Anti-Collision Device (ACD), Train Protection and Warning System (TPWS), Complete Track Circuiting of station sections, Electrical/Electronic Interlocking System in replacement of over aged mechanical/multi-cabin system along with MACLS (Multiple Aspect Colour Light Signalling), Axle Counter for automatic clearance of block section, Light Emitting Diode signals, Vigilance Control Device (VCD), Wheel Impact Load Detector (WILD), Simulators for training of loco pilots, etc. Auxiliary Warning System has been provided in EMUs (Electric Multiple Units) of Mumbai area for more than last 18 years so as to ensure that motorman maintains speed as per signal aspect.

(b) to (d): Pilot project on Anti-Collision Device (ACD) to prevent cases of collisions and to minimize the extent of damage caused by collisions has been in-service trial on 1736 route kilometers of Northeast Frontier Railway. Based on experience on Northeast Frontier Railway, specifications for ACD have been revised to improve its efficacy and reliability. The improved version of ACD with revised specifications is now to be developed by Konkan Railway Corporation Limited (KRCL) for service trials on three zones, namely, Southern, South Central and South Western Railways covering 1600 route kilometers that include multiple line & electrified sections. The estimated cost is Rs.127Cr.

Pilot projects on Train Protection Warning System (TPWS) were sanctioned earlier, out of which one is in use since May 2008 in Chennai Central-Gummiddipundi Section of Southern Railway (50 route kilometers). Service trials are in progress for second pilot project of Delhi-Agra Section (200 route kilometers). TPWS has also been approved for deployment on high density networks/Automatic Signalling Sections covering 828 route kilometers of four zonal railways (North Central, Eastern, South Eastern and Western) at an estimated cost of Rs.570 Cr.

Vigilance Control Device (VCD) for keeping drivers vigilant exists on all 3 phase electric locomotives. After successful trial of this device on 30 conventional locomotives, it has been decided to install these devices in all conventional locomotives. This device has also been installed on 1500 diesel locomotives and it has been decided to install it in the remaining diesel locomotives in a phased manner. The estimated cost for provision of VCD in balance electric/diesel locos is approximately Rs. 245 Cr.

Nine Wheel Impact Load Detectors (WILD) have been installed at various locations and six additional such devices are to be installed.