Technology Intensive Measures Adopted by Railways to Prevent Accidents

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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.

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 and electrified sections. The estimated cost is Rs. 127 crore.

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 Kilomerers). 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 crore.

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

This information was given by the Minister of State for Railways, Shri K.H. Muniyappa in a written reply in Lok Sabha today.