

Ministry of Railways



Indian Railways Approves ₹405 Crore Signalling Modernisation Project on Eastern Railway for Enhanced Safety, Reliability and Faster Fault Detection

Relay-Based Interlocking at 32 Stations to be Replaced with Electronic Interlocking on High Density and Highly Utilised Routes

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In a major step towards modernising signalling infrastructure and strengthening railway safety, Indian Railways has approved a ₹405 crore signalling upgradation project on Eastern Railway involving the replacement of relay-based interlocking systems with Electronic Interlocking (EI) at 32 stations. This includes 25 Panel Interlocking (PI)/Route Relay Interlocking (RRI) stations and 7 Intermediate Block Signalling (IBS) locations on High Density Network (HDN) and Highly Utilised Network (HUN) routes.

The project forms part of Indian Railways' broader strategy to modernise signalling systems on critical routes and improve reliability, safety and operational performance across the network.

Modern Signalling for Safer and More Reliable Train Operations

Many of the existing signalling installations on these routes are based on older relay technology and face operational limitations due to ageing infrastructure. Issues such as non-segregation of clean and dirty wiring, outdated power supply arrangements, improper earthing systems and ageing signalling equipment have led to higher maintenance requirements and increased failure risks.

The approved project will replace these legacy systems with state-of-the-art Electronic Interlocking technology, which offers significantly higher reliability, enhanced safety and faster fault detection capabilities.

Electronic Interlocking to Reduce Failures and Improve Operational Efficiency

Electronic Interlocking systems use advanced digital technology to control train movements and signalling operations with greater precision and reliability. Compared to conventional relay-based systems, EI reduces the probability of signalling failures, improves system availability and facilitates

quicker restoration in case of faults.

The modernised signalling infrastructure will support smoother train operations on some of the busiest railway corridors in the country while enhancing safety standards for both passenger and freight services.

Supporting Capacity Enhancement and Future Railway Technologies

The project is aligned with Indian Railways' ongoing efforts to create a modern signalling ecosystem capable of supporting advanced technologies such as Kavach, Automatic Block Signalling and Centralised Traffic Control on high-density routes.

The approval reflects Indian Railways' continued commitment to modernising critical infrastructure, improving reliability of train services and delivering a safer and more efficient railway network for passengers and freight customers alike.

Dharmendra Tewari/ Dr. Nayan Solanki/ Ritu Raj/ Manik Sharma

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