Ministry of Railways

Indian Railways inducts two State-of-the-Art High Horse Power Locomotives.

These High Horse Power Locomotives are designed & developed under the Make in India Program under PPP Agreement with M/s General Electric

First Fully Digitally Enabled Locomotive with greater Reliability, Maintainability and Availability.

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Indian Railways in collaboration with M/S General Electric (GE) under the Public Private Partnership initiative has inducted two Digitally Enabled Locomotives based on the state of the art insulated-gate bipolar transistor (IGBT) technology which enables the combined advantages of high efficiency and fast switching. As a gesture of inducting the two HHP locomotives on the Indian Railway system, GE handed over the symbolic reverser keys to Chairman, Railway Board, Shri Ashwani Lohani at a ceremony held at Northern Railway's Diesel Loco Shed, Alambagh, Lucknow.

The two HHP prototypes locomotives were wholly designed in India under the Make in India program and manufactured under the Public Private partnership through a MOU with GE. The total investment amount is Rs.13000 crore and under the agreement Indian Railways has a 26% stake. The first GE manufactured Diesel locomotive No 49001 for Indian Railways, shipped from USA, landed in the country on 11th October 2017 and was put to extensive trials. The Salient features of the GE Locomotive are four stroke engine, 12 cylinders, 06 traction motors, AC Dual Cab locomotive; Safety features for self load, toilet facility, Upgraded Computer Controlled Braking (CCB system), Electronic Fuel Injection system, Fuel Efficient locomotive, IGBT based traction technology, Compliant with India's UIC emission norm. The locomotive is also the first fully digitally enabled locomotive with greater reliability and availability and is also provided with a device to manage disasters. In a bid to setting higher benchmarks in maintenance of its assets for better reliability and safety, the Indian Railways had set up maintenance sheds at Roza, UP and Gandhidham, Gujarat.

GE is providing locomotive technology to Indian Railway and by 2025, through a joint venture

company it will manufacture 1000 fuel-efficient locomotives (100 per year) that will be used for freight traffic hauling. Amongst these 700 locomotives will be 4500HP WDG4G and rest 300 locomotives will be of 6000HP. Initially 40 fuel efficient diesel locomotives will be manufactured in GE facility at Erie, Pennsylvania, USA and the rest 960 diesel locomotives will be manufactured in Marhoura, Saran District, Bihar. This production unit spread over 9.15 hectares, with township facility with a total area of 200 acres. This factory will start loco manufacturing from October 2018. Locos will be maintained in Roza, UP and Gandhidham, Gujarat.

IGBT Technology has a three-terminal power semiconductor device primarily used as an electronic switch which and was later developed to give the combined advantages of high efficiency and fast switching. It offers greater power gain than the standard bipolar type transistor combined with the higher voltage operation and lower input losses.

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