Manufacturing of India's First Hydrogen-Powered Train-Set Completed; Green Hydrogen Production Plant Based on Electrolysis Process Being Established at Jind

Indigenously Designed Hydrogen Train-Set Demonstrates Atmanirbhar Bharat; Presently the World's Longest and Most Powerful (2400 kW) on Broad Gauge

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Indian Railways has taken up a state-of-the-art project for running of its first hydrogen train, on pilot basis, as per specifications framed by the Research, Design & Standards Organization (RDSO) to demonstrate the use of hydrogen powered train technology in Railways.

Manufacturing of Hydrogen Train-set has been completed. For providing hydrogen for use in this train-set, a hydrogen plant has been conceived at Jind. In this plant, hydrogen is being produced using electrolysis process which is key element of green hydrogen generation.

Prominent features of Hydrogen Train-set are as below:

- Designed and Developed in India demonstrating Indian Railways' commitment to Atmanirbhar Bharat.
- Presently, it is the world's longest (10 coaches) and most powerful (2400 kW) Hydrogen Train-set on Broad Gauge platform.
- The train-set comprises of two Driving Power Cars (DPCs) of 1200 kW each, totalling 2400 kW along with eight passenger cars.
- Zero CO2 emissions; only emission is water vapour.
- Major step in development of next generation fuel technology in Railways.

This project involved designing from first stages, prototype manufacturing and first-time development of hydrogen traction technology in Indian Railways. As the Hydrogen Train-set and its infrastructure have been developed on a pilot basis, direct comparison of the cost of hydrogen-fuelled trains with established traction systems at this stage would not present a fair cost comparison.

The project establishes the commitment of Indian Railways towards advancements in alternative energy-powered train travel thereby ensuring a cleaner and greener future for the country's transportation sector.

This information was provided by the Union Minister for Railways, Information & Broadcasting and Electronics & Information Technology, Shri Ashwini Vaishnaw, in a written reply to a question in Lok Sabha today.

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