

Special Edition

Toshiba's Contribution to India's Railway Transport Infrastructure

Indian Railways' (IR) tagline reads 'Lifeline to the nation', and aptly so. For a country which ranks seventh in terms of its area with its topography ranging from mountains, valleys, tablelands, seashores, deserts, to flat terrains, one thing that binds the entire nation together is the Railways. Since the day the first track was laid down for the steam snorting iron horse, Railways were integral to the development of the Indian economy.

With this issue of the newsletter, we want to showcase how Toshiba contributes to the development of India's transport infrastructure with its abundant experience in railway systems in Japan and around the world.

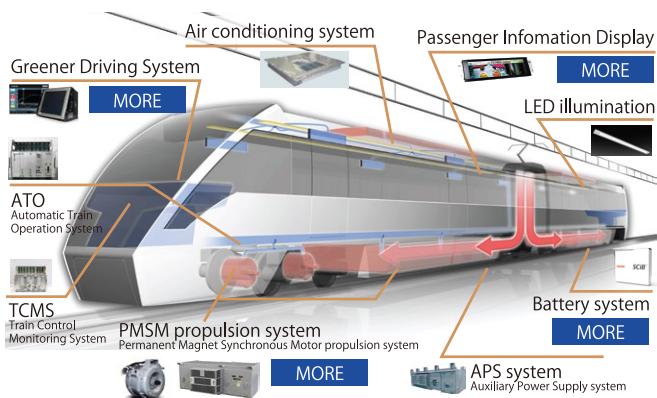
TOSHIBA TECHNOLOGY FOR INDIAN RAILWAYS: MAKE-IN-INDIA

Indian Railways plays a pivotal role in reviving economic growth in the country and investment in the railways has a large multiplier effect on the rest of the economy. Under the Government of India's (GoI) 'Make-in-India' program, 100% Foreign Direct Investment (FDI) in the railway infrastructure segment has been allowed which has opened up opportunities for participation in infrastructure projects such as high-speed railways, railway lines, projects relating to electrification, high-speed tracks, and suburban corridors. This has also given way to Public Private Partnerships (PPPs) that are an innovative way of delivering modern, high-quality

public services and promoting the country's competitiveness.



Toshiba's first association with India's quest for an efficient and safe transport network was when it first received an order from Indian Railways for 15 electric locomotives in the 1960s. Since the early 2000s, Toshiba has kicked its railway system business into gear. To further support India's railway network overhauling plans and 'Make-in-India' initiatives for railways, Toshiba established a new production facility for electrical equipment for railway systems in Hyderabad in 2016.



HIGH SPEED RAIL: THE FUTURE IS NOW

Looking to the future, concerns over depleting fossil-fuel reserves, climate change, overcrowded airports, delayed flights and congested roads have birthed the need for high-speed railway technology alternative. In 2015, India and Japan signed a MoU on cooperation and assistance in the Mumbai – Ahmedabad High Speed Rail (HSR) project, also known as the Bullet Train project. The project is based on Japan's Shinkansen famed for its outstanding safety record, punctuality and relatively low emissions, which are highly desirable technology for many countries.

Toshiba holds significant experience in delivering a high-speed rail system in Japan with its electrical and electronic systems for the high speed-rail, including power supply system and electrical equipment for rolling stock. Toshiba has a unique potential to play a role in realizing India's plan for high-speed rail projects.

Toshiba, with over 115 years of R&D in railway technology, has worked to improve every requirement of railway transportation, such as environment adaptation, safety, punctuality, comfort, and reliability. Toshiba with its advanced energy-saving solutions promotes technologies that contribute to reducing electricity consumption and greenhouse gas emission, leading to improved city environment.

Toshiba's technological breakthroughs can not only shape the future of Indian railway system but can also be lead a contributor to India's potential market for electric locomotives. The company has a long history of manufacturing and supplying rolling stock systems, information systems, and power supply systems for customers in Japan and in rest of the world too.



With its total solution capabilities in constructing transportation infrastructure, which is indispensable for India's further economic growth and people's better life, Toshiba will continue to contribute to the growth of industries **FOR THE NEXT INDIA.**

