

## **Pamban to become India's first railway bridge to use stainless steel structurals** *Jindal Stainless keen to bid and support Railways in this venture*

**February 7, 2019, New Delhi:** In its quest to modernize and upgrade the railway infrastructure, the Indian Railways has decided to deploy stainless steel for its visionary Pamban railway bridge project. Rail Vikas Nigam Limited (RVNL), Chennai, the extended engineering arm of Indian Railways, included SS 2205 duplex stainless steel grade as an integral component for the fabrication of 4 spans/girders of the new Pamban bridge. To kick start this project, RVNL has floated a tender for supply of 120 MT of stainless steel. With this, stainless steel has made its ground-breaking debut as a key material for the structural railway bridge framework. Commenting on the development **Managing Director, Jindal Stainless, Mr Abhyuday Jindal** said, *"We welcome this progressive step by the Indian Railways and we're keenly looking forward to partner with them for this start. We are a consistent supplier to Indian Railways in the wagon and coach segments with a market share of 70% and 60% respectively. As an Indian producer, with a veritable presence across the globe, Jindal Stainless is adept to supply an entire gamut of product range, from lean duplex to super duplex stainless steel. It's encouraging to see Indian Railways opting for sustainable infrastructural solutions."*

The existing Pamban railway bridge, commissioned in 1914, connects the town of Rameswaram on Pamban Island to the Mandapam railway station on mainland Indian peninsula. The bridge is located in the second most corrosive region in the world, and hence in order to address the corrosion related problems and the associated high repair and maintenance costs, Indian Railways has decided to adopt duplex stainless steel for fabrication of 4 girders of the new Pamban Bridge.

Compared to carbon steel, duplex stainless steel is an optimum techno-commercial solution to avoid corrosion in this engineering marvel. SS 2205 duplex grade of stainless steel has an excellent combination of strength, toughness and corrosion resistance. Given the inherently high strength-to-weight ratio of duplex stainless steel, it provides the possibility of reducing the thickness of the components, thereby entailing a lighter structure. With lesser weight of the structure, the consumption of concrete will also see a significant reduction. Along with high resistance to pitting and crevice corrosion, even in the most corrosive environment, duplex stainless steel provides excellent impact and fire resistance.

On account of its extremely high corrosion resistance, duplex stainless steel can be used in unpainted condition, requiring minimal maintenance. This results in saving heavy recurring maintenance costs. Moreover, usage of duplex stainless steel will improve the structural life

**Press Release**

of the bridge by 3 to 4 times, as compared to the currently used carbon steel. Thus, overall, usage of duplex stainless steel provides the least life cycle cost as compared to any other alternative material.

From an environmental perspective, stainless steel, being a completely 'green metal', provides a sustainable and long-term solution.