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The Indian Railways, which is on the path of development, is now moving towards showcasing a classic example of an engineering marvel with the newly proposed Pamban Bridge.

Indian Railways began the construction work on the new 2.05 km Pamban railway bridge in Mandapam, which will connect Rameswaram to the mainland in Tamil Nadu.

The new bridge will help the railways to operate trains at higher speed, carry more weight and increase the volume of traffic between Pamban and Rameswaram.

The more than two-kilometre-long bridge, which is likely to cost 250 crore, will have a 63-metre stretch, which will lift up while remaining parallel to the deck to allow access to the ships.

While the current bridge has the 'Scherzer' rolling lift technology in which the bridge opens up horizontally, to let ships pass through, in the new one, a 63 metre section will lift vertically upwards remaining parallel to the deck. It will be done using sensors at each end.

Talking to ANI, the General Manager of Southern Railway said, "The old Pamban bridge was commissioned on February 24, 1914. So, almost 108 years passed, and now the time has come to move forward with new technologies. The estimated cost of the new bridge is 250 crore and the target is to complete it this year only."

Giving information about this bridge, the Divisional Engineer and Incharge of Pamban Bridge, Hridayesh Kumar said, "The existing bridge structure has a total length of 2,058 metres comprising 146 spans of steel girders. There are 145 spans of 12.20 m and one navigational span of 61.0 m. The navigational span is also known as Scherzer rolling lift span after the name of railroad engineer William Scherzer who invented it."

"The vertical clearance of only 1.5 m is available between the high tide level and the bottom of the girder resulting in the splashing of seawater on the girders. In comparison, the new bridge will have 100 spans of 18.3 m and one navigational span of 63 m. It will be 3.0 m higher than the existing bridge with navigational air clearance of 22.0m above sea level," he further added.

Mentioning the technology for the operation of the new bridge for ships movement, Kumar said, "Because of vertical lift, the full horizontal width of 63 m will be available for navigation. Also, the entire bridge including the navigational span will be designed keeping in mind the Railways plan of electrification and maintaining the speed of the trains at 80 km per hour."

"In comparison to existing manual operation and control, the new bridge will have electro-mechanical controlled systems which will be interlocked with train control systems. Due to the heavy flow of water, it is also proposed to deploy cutting-edge technologies like stainless steel reinforcement, composite sleepers, and a long-life painting system in the construction of the new bridge," Kumar added.

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