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## Press Release

# **India converts adversity into accomplishment**

## **Afcons builds world's highest single-arch railway bridge, 35m taller than Eiffel Tower, in Himalayan terrain**

Mumbai: When many international construction giants shied away from the formidable challenge of building the world's highest single-arch railway bridge in the treacherous Himalayan terrain, Afcons rose to the occasion and turned adversity into achievement. Towering 359 metres above the river and 35 metres higher than the Eiffel Tower in Paris, the bridge now stands as a marvel of engineering. Now operational, it connects the Kashmir Valley to the Indian subcontinent by rail for the first time. The bridge is designed to withstand earthquakes and bomb blasts and is a testament to resilience and innovation.

Afcons Infrastructure, the leading global EPC company of the Shapoorji Pallonji Group, has constructed this engineering marvel, showcasing its exceptional engineering prowess and ability to deliver world-class infrastructure in the most challenging terrains.



Shri Narendra Modi, Prime Minister of India, inaugurated the Chenab Railway Bridge on June 6, 2025. Photo credit: PMO India

The 1.3 km long bridge is part of the Government of India's ambitious Udhampur-Srinagar-Baramulla Rail Link (USBRL) Project, which aims to connect Jammu & Kashmir to the rest of the country through an all-weather railway connectivity. The design life of the bridge is of 120 years, showcasing robust engineering standards.

The Chenab Railway Bridge incorporates several unique features that set new benchmarks in bridge engineering. It is designed to withstand extreme wind speeds of up to 266 km/h (74 m/s), making it resilient against harsh environmental conditions. In addition, it has been engineered to resist seismic forces of Zone-V, the highest-intensity earthquake zone in India. Notably, it is also India's first railway bridge designed to resist blast loads, underscoring a new level of safety and structural fortification. The bridge has been constructed with built-in redundancy; even if a pier or trestle were to be removed, it would remain operational at a restricted speed of 30 km/h and would not collapse under its own weight.



Chenab Railway Bridge, Jammu and Kashmir, India

To execute this iconic project, Afcons deployed some of the world's most advanced construction technologies and equipment. The erection of piers, trestles, and the steel arch segments was carried out using the world's largest-capacity crossbar cable cranes, custom-designed for the project. The pylon height of the cable crane at the Srinagar end stands at 127 metres, which is significantly taller than Delhi's Qutub Minar (72 metres). These innovations made construction possible in a remote and geologically complex Himalayan region.

The construction of the Chenab Bridge also marked several engineering firsts in Indian Railways. For the first time, Phased Array Ultrasonic Testing (PAUT) technology was used for the inspection of welds. A National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited testing laboratory was established onsite — another first — to maintain stringent quality controls for weld testing during construction. The project also saw the first-ever execution of incremental launching of a deck structure on combined circular and transition curves on Indian Railways, a feat of precision engineering rarely achieved anywhere in the world.

Krishnamurthy Subramanian, Executive Vice Chairman, Afcons, said, "The Chenab Railway Bridge is more than just a marvel of engineering. It is a symbol of India's resolve to conquer the most formidable challenges with ingenuity and courage."



S Paramasivan, Managing Director, Afcons, "For Afcons, it represents our unwavering commitment to nation-building and our ability to reimagine infrastructure in the toughest terrains. This bridge will inspire generations of engineers and stands as a tribute to the power of Indian engineering and teamwork."

### **About Afcons Infrastructure Ltd**

Afcons Infrastructure Ltd is flagship infrastructure engineering and construction company of the Shapoorji Pallonji Group. It has a legacy of over six decades, with strong track record of executing numerous technologically complex EPC projects both within India and internationally. As per the latest ENR survey, Afcons is ranked in Top 140 international Contractors globally; 12th in Bridges and 14th in Marine & Ports.

For more info

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