AFCONS INFRASTRUCTURE LIMITED

Shapoorji Pallonji

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TO WHOM SO EVER CONCERNED

Prof. T G Sitharam is our consultant for slope stability measures and foundation design of Chenab Bridge since Jan 2005. Chenab bridge is a railway steel arch bridge under construction between Bakkal and Kauri villages in the Reasi district of Jammu and Kashmir in India. Northern Railway has undertaken the mega-project of constructing a new railway line across the Indian state of Jammu and Kashmir between the towns of Udhampur near Jammu and Baramulla on the northwestern edge of the Kashmir Valley. This project has been declared a national project in 2002. When finished, the bridge will span the Chenab River at a height of 362 m above the river, making it the world's highest rail bridge. In November 2017 the arch foundations were declared completed allowing for the start of the construction of the main arch. The bridge is scheduled to open in 2019. The bridge is being executed by a Joint Venture of Afcons Infrastructure Limited, a group company of Shapoorji Pallonji Group, the third-largest construction group in India.

The bridge is located in the most formidable Himalyan terrain which is notorious for unstable slopes and frequent seismic activity. Thus the foundations and slopes of the Chenab bridge need a lot of care in the design and execution. Prof. Sitharam of Indian Institute of Science, Bangalore is working as our geotechnical expert for the Chenab bridge right from its inception in 2005. After initial inspection to the site in 2005, he has suggested for carrying out the required geotechnical investigations at site, carried out elaborate stability analyses of slopes under different loading and complex geological conditions both in 2D and 3D using the state of the art softwares and approaches. He was also involved in the review of method statements. He has presented his reports in various forums like Technical Advisory Board (TAB) of Konkan Railway and in many review meetings with external experts, railway officials to convince them about the adequacy of the slope stabilization measures. More than 11 lakh cum of rock was excavated from the slopes for the construction of the bridge. All this resulted in the systematic work and the whole excavation and slope stabilization works were carried out successfully without any untoward incident. Considering the varying nature of the geology, he introduced the concept of "Design As You Go" and assisted Afcons to set up system for continuous validation of the design data during the execution of slope stabilization works. He was always available at short notice to guide wherever the strata changed and there were geological surprises. With his guidance, all the surprises were dealt promptly.

He is one of our finest consultants from academia in India and we are very thankful to him for his continuous support and candid opinions. We wish all the success in all his endeavors.

Giridhar Rajagopalan
(Executive Director - Technical)