The 2nd Wuhu Yangzi River Bridge: a 806m Span Cable-stayed Bridge use U-Shape Anchoring System

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Abstract

The U shape anchoring system is a brand-new anchoring system. It is developed on the basis of saddle anchorage. In this paper, a super long cable–stayed bridge that uses U shape anchoring is introduced.

The 2nd Wuhu Yangzi River Bridge is a super long span cable-stayed bridge under construction. It is a double-pylon cable-stayed bridge with an 806m main span. The main girder of it adopted separate steel box girder and four cable planes arrangement.

U-shape cable system is used on the pylon, which can make the pylon slimmer and the width of middle groove can be reduced. It is also the key to the whole structure system's establishment.

U-shape saddle is the core component of the U-shape cable system. It transmits the cable forces to the pylon, avoiding the tensile stress in the pylon. It expands the usage of traditional saddle. With the results of finite element analysis and theoretical analysis, its rationality has been proved. Using the integral saddle installation method, the construction becomes more efficient and gets higher construction quality.

Now, the construction is being carried out at full speed, and is expected to be finished at the end of 2017.

Keywords: cable-stayed bridge; anchor area; durability; U-shape cable system.

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