



Design and Technological Innovation of Maanshan Yangtze River Highway Bridge

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Summary

Maanshan Yangtze River Highway Bridge was opened to traffic in December 31, 2013. It is a national key project of highway construction, which is beneficial to the improvement on the traffic network. Briefed here is the construction conditions and key technical innovation, with emphasis on the size and technical features of the bridges on the two channels.

Keywords: Maanshan Yangtze River Highway Bridge, Three-tower suspension bridge; Suspension Bridge; Cable Stayed bridge;

1. Introduction

Maanshan Yangtze River Highway Bridge runs across the south and north channels at the Jiangxin Island, connecting the Maanshan city, Jiangxin Island and He county. 27 kilometres downstream from the existing Wuhu Yangtze River Bridge, approximately 44.5 kilometres from the downstream Dashengguan Yangtze river bridge.

At the bridge site the Yangtze River is divided into two branches, 2km width branch left is the main river, its tributary to the right width 800m, as shown in the project location map in Figure 1. The section thalweg of left branch have experience the process of swing from left to middle, and then to right, historically. The right branch has a relatively stable riverbed.

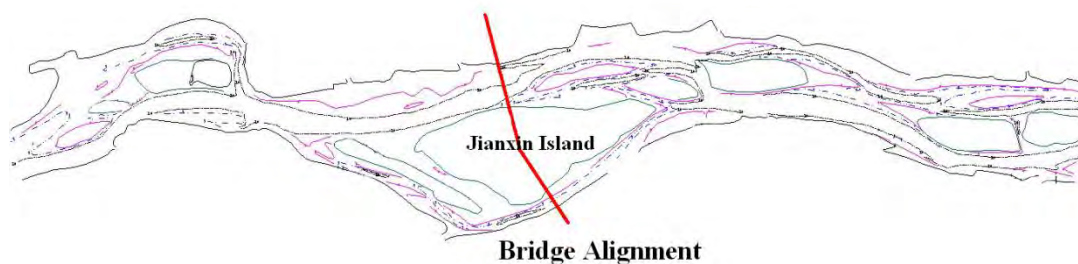


Fig. 2: the project location map

2. The main technical Requirements

The bridge is designed to carry six lanes of highway, and the design speed is 100km/h. the total width of the bridge deck is 44 meters out to out; the width of deck double framing layout is 16m. Left branch is grade I channel. According to the results of navigable demonstration, the left branch should be design as two-way navigation channel; its clear width could not less than 790m.

The right branch is grade III channel, requiring one-way navigation clear width not less than 190 meters, two-way navigation clear width not less than 330 meters.