



## Dashengguan Bridge—The longest span arch bridge for high-speed railway

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### Summary

The Nanjing Dashengguan Bridge is the control project on the Beijing-Shanghai High-Speed Railway, whose design speed is 300 km/h. The main bridge adopts large span continuous steel arch truss structure with a total length of 1 615 m. The two main spans over main navigation channels of the Yangtze River utilizes steel arch truss 336 m long each. The arches comprise three truss planes above orthotropic deck. Erection of the steel arch truss adopts double cantilever method with auxiliary cables supported by towers on piers.

**Keywords:** high-speed railway bridge, Dashengguan Bridge, steel arch truss bridge, three-plane trusses, railway orthotropic deck, stiffened hanger

### 1. General Introduction

The Nanjing Dashengguan Bridge is a control project on Beijing-Shanghai High-Speed Railway ( hereafter referred to as Jinghu High-Speed Railway ), it is also the main component part of the Shanghai-Wuhan-Chengdu Railway and the railway system in