

The Zhoushan Mainland-Island Linking Project Consisting of Five Sea-Crossing Bridges

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Abstract

This paper introduces the construction and provides general information on the Zhoushan Mainland-Island Linking Project, which includes five sea-crossing bridges. The primary focus is on the Xihoumen Bridge and the Jintang Bridge.

Keywords: Zhoushan, mainland, mainland-island linking project, sea-crossing bridge

1. Introduction

Situated at the eastern part of the Yangtze River Delta, Zhoushan is a famous sea port, fishing port, and tourist city. It is referred to as "the Pearl in East China Sea". It contains more than 1 300 islands within in its jurisdiction area. Although the straits separting Zhoushan from the mainland are beautiful, they pose a barrier to the transportation between the mainland and islands. The Zhoushan Mainland-Island Linking Project was launched in the 1990s to enhance the development of the Zhoushan Prefecture. Expected to be completed in 2009, the project will link the mainland to the five islands, providing convenient transportation for the local people(Fig. 1).

2. Construction Scale

The project begins at the round-the-island highway at Yadan Mountain, links with the National Road 329 and the outer ring road of Dinghai City, passes through Lidiao Island, Fuchi Island, Cezi Island, Jintang Island to Ningbo Zhenhai, connects with Ningbo Ring Road, and overpasses Cengang Waterway, Xiangjiaomen Waterway, Taoyaomen Waterway, Xihoumen Waterway, Ligang Waterway and Huibieyang Sea. In short, the project crosses five islands and six waterways for a total length of 49.96 km. The five large sea-crossing bridges of the project are introduced in this paper.

3. Main Technical Criteria

The main technical criteria are as follows:

- (1) Highway grade: dual-way four-lane expressway.
- (2) Design speed: 60 km/h for the first phase; 80km/h and 100 km/h for the second