

Busan-Geoje Fixed Link: General Outline of the Project

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Summary

This paper describes the construction of US \$ 2.5 billion fixed link connecting Busan to the Geoje Island on Korea's south coast. The 8.2 km long link includes two major cable-stayed bridges, viaducts, bored tunnels and 3.2 km long immersed tunnel which, at 48 m water depth. The link provides easy access between metropolitan Busan city and Geoje Island with 2 hours journey time reduction. The site location is an exposed offshore, which is subjected to strong winds, large swell waves and strong tidal currents. These conditions together with the tunnel being the deepest immersed tunnel of its type ever built and the bridges being exposed to a high wind speed and typhoons, made the project unique and one of the most challenging structures ever built.

Keywords: two cable-stayed bridges; immersed tunnel; 2 hour journey time reduction; exposed offshore condition; most challenging structures.

1. Overall Description of Project

The project carries national road (NR) 58 across three navigation channels that provide access to the new Busan port and to naval dockyards, linking Gaduk Island near the city of Busan to Geoje Island via Daejuk, Jungjuk and Jeo Islands. These are linked by three principal elements of the crossing (Figure 1)



Fig. 1: A bird's eye view of the link