



Pelješac bridge - Design and construction

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Abstract

The 2404 m long Pelješac Bridge ranks among the most demanding bridges in the world in terms of both the technological complexity of construction and the complexity of the design. The bridge is located in an area of extremely high seismic activity, exposed to strong and gusty north and south winds. It is designed as a multi-span extradosed bridge with a semi-integral hybrid structure with five 285 m long central spans. Once built, the bridge will rank among the 5 largest and most attractive European bridges built in the early 21st century.

Keywords: extradosed bridge, stay-cables, deep foundation, piles, earthquake, wind, construction

1 Introduction

A solid road link between all parts of Croatian territory will be established upon completion of the Pelješac-Mainland Bridge. The Dubrovnik-Neretva County will be linked with the Croatian territory, which will greatly contribute to the development of Dubrovnik, Pelješac Peninsula, and the entire Southern-most County of Croatia.

The bridge is located in a highly sensitive and by Natura 2000 protected area of Mali Ston Bay which

hosts the largest oyster cultivation facilities in the Adriatic Sea. The distance over the obstacle amounts to approximately 2140 m at the sea level. The total length of the bridge between the abutment axes is 2404 m, while the bridge length with abutments amounts to 2440 m. The sea depth varies between 7.0 and 28.0 m.

The minimum required navigation clearance, harmonized with Bosnia and Herzegovina is 200 x 55 m.