

Cable-stayed Bridge over the Labe at Nymburk

Milan Kalný
Technical Director
Pontex Ltd.
Prague, Czech Republic
kalny@pontex.cz

Václav Kvasnička
Consulting Engineer
Pontex Ltd.
Prague, Czech Republic
kvasnicka@pontex.cz

Pavel Němec
Consulting Engineer
Pontex Ltd.
Prague, Czech Republic
nemec@pontex.cz

Antonín Brnušák
Division Director
SMP CZ, a.s..
Prague, Czech Republic
brnusak@smp.cz

Summary

At present the I/38 road passes through the historical centre of Nymburk and due to transit traffic, it brings a heavy traffic load to the city with a narrow city bridge. These circumstances have resulted in the decision to build a new city by-pass northeast of Nymburk including a new bridge over the Labe river. The route of the I/38 road by-pass is situated in the flat plain of the Labe lowlands. Due to the traffic conditions as well as the requirements of the Labe Basin Authority, a main span of 132 m together with a very shallow structural depth for the bridge superstructure were required. This bridge over the Labe is the first cable-stayed bridge in the Czech Republic with two planes of stays and low pylons. This type of so-called „extradosed“ bridge structure represents a transition between the traditional cable-stayed bridge and a bridge with external prestressing tendons.

Keywords: Cable-stayed bridge, extradosed bridge, prestressed concrete, composite deck



Fig. 1 Visualization of the cable-stayed bridge over the Labe near Nymburk