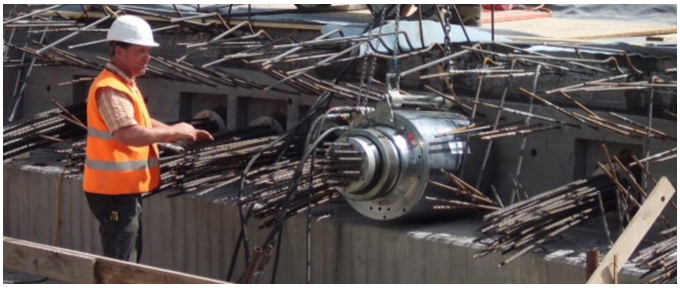
Donaubrücke



SHORT DESCRIPTION

New construction of the Danube bridge as a 2-span bridge in Tuttlingen

THE PROJECT

The B 311 and the B 14 were bundled in Tuttlingen to improve traffic conditions in Tuttlingen and to create an efficient, national road network.

In the course of this, the new construction of the Danube bridge as a 2-span bridge in Tuttlingen was necessary.

The superstructure consists of a prestressed and haunched T-beam cross-section, the cross-section height in the field is 1.5 m and increases to 2 m above the central support.

Due to a special proposal, tendons with 31 strands St1570 / 1770, a cross-section of 4,650 mm^2 per bundle and a permissible prestressing force of 5,929 KN according to approval certificate Z-13.1-114 were used for the first time in Germany for the internal prestressing of a new bridge. 12 BBV L31 tendons with lengths of approx. 62 m were installed.

Compared to the types usually used with 19 or 22 strands, the larger tendon units reduced the space required for prestressing in the concrete cross-section and concentrated the required tension force in the superstructure cross-section. The lower number of tendons resulted in a better concreting situation for the cross-section.

The prestressing steel strands were shot into the laid HR 115/122 ducts on the construction site with a hydraulic pushing device.

The post-tensioning force was applied in 3 stages (30%; 70%; 100%) using a hydraulic press with a nominal load of 6,500 KN. After 70% pre-tensioning force, the shoring could be lowered. A low-shrinkage special mortar was then pressed into all tendons to protect the prestressing steel from corrosion and to create the subsequent bond.

Please note that this project was carried out at a time when the company in question was part of the Bilfinger Group and not the Implenia Group. The company was only sold to the Implenia Group in 2015. The Bilfinger Group and the Implenia Group are different corporate groups that are not linked to one another and operate independently of one another.

FACTS

Location	Tuttlingen , Germany
Status	completed
Start of construction	April 2014
Completion	July 2014
Building owner	Regierungspräsidium Freiburg
Contracting entity	Bilfinger Regiobau GmbH
Planning	Konstruktionsgruppe Bauen, Konstanz

SERVICES

Post-tensioning system

Bridge construction

https://www.bbv-systems.com/en/projects/detail/ref/danube-bridge/

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