Danube Bridge Günzburg

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Abstracts: North of Günzburg a new bridge over the Danube has been erected. Across the river a designed tied-arch bridge was built. The arch slabs are inclined towards each other in the cross section and connected to each other by cross beams creating a gate effect. The inclination of the arch slabs is consistently continued in the geometry of the substructures. The crossing hangers complete the characteristic of the tied-arch bridge.

1. Initial Situation, Infrastructure

North of Günzburg, in the course of federal road B16, a bridge crosses the Danube. Günzburg is situated in the middle between the federal state capitals of Munich and Stuttgart as well as the cities Ulm and Augsburg directly at motorway A 8. The location of the bridge has been used for centuries, and it has constantly been renovated and replaced by new structures.

After the World War II a steel truss bridge on concrete substructures was erected that reached the end of its life cycle due to increasing traffic volume in the last decades. So in 2007 design of a new bridge began.

Figure 1: Situation 2007, existing truss bridge

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2. **Design**

The situation in the area of the bridge is marked by the Danube, and foot and cycle paths along its river banks, by woodland on the northern side and starting urbanisation on the southern side.

![Figure 2: Situation 2007, existing truss bridge](image)

After comprehensive variant studies, the design of a striking tied-arch bridge across the river with piles near the banks and small foreland bridges was selected. The visual effect of the river bridge is highlighted by its limitation to a river span and the reflection of the structure in the Danube. In this way it does not “disappear” into the wood at the banks.

![Figure 3: Front view](image)

The river bridge is a steel tied-arch bridge with a span width of 83m. The superstructure consists of two external arch slabs, formed by arch, stiffening girders and hangers. Between the stiffening girders are cross beams onto which the reinforced concrete slab, the bridge caps, the carriageway and other road equipment, such as protecting devices, railings and lighting, are installed.