



# ÖBB DANUBE BRIDGE TULLN

## AN INNOVATIVE BRIDGE CONSTRUCTION



Dismantling old structure



Load test

104 years after being built, the existing railway bridge across the Danube at Tulln has been completely reconstructed. The new bridge is based on a composite truss construction. After a construction time of only 15 months, commissioning in September 2009 was the last step in a project that will make European bridge construction history. In addition to the technical challenge of building a 440-m long bridge across the Danube, the extremely short construction time available placed even tougher demands on MCE. MCE only had a period of ten months available for planning, manufacturing and assembly of approx. 3,700 tons of steel construction.

The disassembly procedure for the existing steel construction was subdivided into two areas due to construction circumstances: those areas situated over land, and those situated over water. The supporting structures with a span of 85.0 m that were largely situated over land were disassembled via mobile cranes. The three river spans, each with a length of around 90.0 m and a weight of 850 t, were removed from their position with the aid of pontoon units and were subsequently pushed onto land over a suitable lateral shifting track and disassembled.

The main idea of the assembly concept developed by MCE was to manufacture two large components with a length of 182 m and a weight of 1,550 t each in parallel with the Danube using incremental launching followed by floating them into their final locations using pontoons. Those parts of the outer spans that are located across land with a length of 38 m each were mounted in their final locations via auxiliary supports.

Building its 25th bridge in the course of its company history MCE GmbH has once again been able to demonstrate its proficiency in the construction of steel bridges. Using structural steel has a lot of advantage, one of which is the reduction in traffic disruptions and impacts on the environment.

#### Facts & Figures:

Steel weight:	3,700 t	Construction:	Truss girder bridge with composite deck
Length:	440 m	Customer:	ÖBB Infrastruktur AG
Width:	13 m	Construction period:	2008 - 2009
Steel quality:	S355M, S355J2		

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