Amstetten, July 2013

Press release

**Sinntal Viaduct: Forming wagon TU lends elegance to cantilevered parapets**

**On the A7 near Bad Brückenau in Northern Bavaria, Germany, an aesthetically appealing bridge spans the valley of the River Sinn in a broad sweep. As part of the works on this new bridge, around 3000 linear metres of elegantly shaped cantilevered parapets had to be formed in fair-faced concrete quality, using longitudinal planed tongue-and-groove board formwork. 4.00 m long Forming wagons TU from Doka, coupled together to make 28.00 m long travelling units, helped work to progress both safely and swiftly, as they could be towed ahead rapidly in a single operation.**

Behind the nondescript acronym ‘BW 595b’ is the new, 755 m long Sinntal Viaduct. It was built directly alongside the old bridge as a 53.00 m high steel composite bridge with a radius of 1290 m, resting on 14 elegant hollow piers with support centres of up to 107.00 m. The whole project was carried out by contractors Max Bögl of Neumarkt, Bavaria.

**Tight space constraints between the inside median parapets**

To cast the 0.75 m high and 0.43 m wide cantilevered parapets from CIP concrete, the construction firm relied on the versatile Doka forming wagon TU. Two complete wagon-trains, each 28.00 m long, were in service here – one for the outer parapets, the other for the median parapets. Space between the fair-faced concrete median parapets was extremely limited, as the two new carriageway decks, with a total width of 30.10 m, are only 10 cm apart.

The Forming wagon TU is a bridge-edge forming wagon that is attached beneath the cantilever slab. Being fully underslung, there are no constructional components that would obstruct operations on the top of the bridge. This means that the concrete can be reinforced, poured and struck off without hindrance, and thus quickly. The ‘Capped support shoes TU’ are fixed onto the underside of the cantilever slab either from a crane-cage or from a positioning platform. This unit also has an integral launching nose which enables the ‘Travelling profiles’ to be precisely guided into the ‘Capped support shoes TU’.

**Workplace safety in every situation**

The ‘Capped support shoes TU’ themselves are fixed to the type-tested Doka bridge edge beam anchors, permitting cantilever-slab inclinations of up to 15°. To prevent the construction rolling on accidentally, the wagons are fitted with self-actuating gravity brakes that automatically release when the wagon-train is towed.

To tow the wagon-trains, the site used a telescoping stacker truck. Alternating between the two forming-wagon trains, the well co-ordinated team cast 24.00 linear metres of cantilevered parapet a day, in fair-faced concrete that is definitely worthy of the name.

**Cliented opted to purchase rented forming wagons**

Before work on the site had even finished, the Max Bögl construction company decided to exercise its purchase option on the Forming wagons TU that it had been renting. This came as no surprise to Doka consultant Marcus Günther: “Right from the very first usage cycles, Bögl were absolutely convinced by the speed and precision of the Forming wagons TU.”

**In brief**

**Sinntal Viaduct**

Contractors: Max Bögl GmbH & Co. KG, Neumarkt

Formwork planning: Doka Nuremberg Branch and Doka Applications Technology Dept., Maisach

**About Doka:**

Doka is a world leader in developing, manufacturing and distributing formwork technology for use in all fields of the construction sector. With more than 160 sales and logistics facilities in over 70 countries, the Doka Group has a highly efficient distribution network which ensures that equipment and technical support are provided swiftly and professionally. An enterprise forming part of the Umdasch Group, the Doka Group employs a worldwide workforce of more than 6000.

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**Captions:**

Doka\_2013\_07\_Sinntalbruecke\_IMG\_01

Fair-faced concrete cantilevered parapets of superior quality and precision, formed and cast using the underslung Forming wagon TU.

Photo: Doka

Doka\_2013\_07\_Sinntalbruecke\_IMG\_02

Large-area formwork Top 50 was used as the basis for the elegant shape of the parapets.

Photo: Doka

Doka\_2013\_07\_Sinntalbruecke\_IMG\_03

Each of the easy-to-operate Forming wagons TU enabled 24.00 linear metres of cantilevered parapet to be formed and cast every two days.

Photo: Doka

Doka\_2013\_07\_Sinntalbruecke\_IMG\_04

The Doka forming wagon TU delivered both precision and speed on the Sinntal Viaduct.

Photo: Doka