BLUMENBECKER

WE DELIVER SOLUTIONS

AUTOMATION TECHNOLOGY ENGINEERING INDUSTRIAL TRADE **INDUSTRIAL SERVICE** TECHNICS

REFERENCE

Crane Manufacturing | double-girder bridge cranes

Delivery of four new crane units

CLIENT:

ALUnna TUBES

Aluminiumwerk Unna AG
Uelzener Weg 36
59425 Unna

PROJECT COMPLETED BY:

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COMMISSION:

To design, build and install four double-girder bridge cranes for a production shop making aluminium pipes

CRANE TECHNOLOGY TO THE VERY HIGHEST STANDARDS

New-builds, installation and final inspection, refits and overhauls, testing and servicing: Blumenbecker is your partner for crane systems of all makes and types. We do not just service your crane – we can also fit a completely new automation system. Our specialist engineers can answer all your crane stability and safety questions. We can inspect your crane track and provide advice on crane applications. Contact us for the right solution every time.

ALUMINIUMWERK UNNA AG

Aluminiumwerk Unna AG is part of the aluminium semis industry and is a leading manufacturer of aluminium pipes and tubular profiles. The firm also produces strip and continuous castings.

THE COMMISSION

Aluminiumwerk Unna AG required four cranes for handling and transporting aluminium profiles up to 12 m in length. The cranes would also be needed for orientating the pipes in a longitudinal and lateral direction. The Blumenbecker solution was to install four double-girder bridge cranes with rotating crab units and two hoists on each crab. The cranes were equipped for radio control and the crab hoists would be designed for individual or parallel operation.

CONTRACT SCOPE

The structural specifications, which included limiting the horizontal and vertical wheel loads at the crane track, called for a lightweight crane installation with a large wheelbase. The end carriages and crab units were therefore constructed primarily from hollow sections and FEM optimised. The crane bridges were partly manufactured from 5 mm plate (web plates).

Because of the site conditions significant effort would have been required to transport the crane bridges (span length 33 m) to the assembly point as fully-assembled components. The bridges were therefore delivered in sections and welded together on site. This meant that suitable parting points had to be identified in advance, along with the subsequent welding sequence. The bridges were aligned and adjusted using optical devices (precision theodolite).

With the assembly being undertaken under construction site conditions, the team faced a real challenge to ensure adherence to all production tolerances (track gauge, bridge straightness, end carriage parallelism).

FACTS AND FIGURES

- 4 double-girder bridge cranes with rotating crab (continuous rotation), 2 crab-mounted hoists, catwalk on the crane bridge
- crane and crab travel are frequency controlled
- pole-switchable hoisting and rotating gear
- crane load capacity: 6.4 t (2 x 3.2 t)
- crane travel speed: 80 m/min max.
- crab travel speed: 32 m/min max.
- hoisting speeds: 12.5 m/min max.
- rotation speed: 1 rpm
- deflection of the crane bridges at nominal load: 1/1000 x span width
- crane classification: DIN 15018 H2/B4
- crane weight including crab: approx. 25 t