

Riga-Mainz completes impressive job with trio of powerful Liebherr cranes

- LR 1600/2 and two Liebherr mobile cranes hoist 418-tonne bridge into place
- Smart concept with SPMT modules and three cranes proves successful
- New LTM 1450-8.1 proves its worth for heavy duty job

Ehingen / Donau (Germany) 15 December 2017 – Riga-Mainz produced an impressive performance in a demanding crane and heavy load job involving the installation of a bridge in Essen during November. A steel bridge weighing 418 tonnes and measuring around 50 metres in length had to be positioned over a section of railway track. One of the cranes involved was the new Liebherr LTM 1450-8.1 mobile crane.

The fact that the multi-track section of railway over which the bridge was to be positioned had to be closed set the timetable for this tricky transport and hoisting work. The bridge had to be installed over the railway track below over the course of two nights with timeframes of just three and a half hours on each occasion. Initially, the plan was to install the bridge by pushing it into position. Since, however, the bridge is a parallelogram in shape when viewed from above and spans the tracks at an acute angle, it was decided that this approach was not the correct one for this job. It was replaced by an alternative installation concept developed by Uwe Langer, Managing Director of Riga-Mainz.

The massive steel construction, which had been assembled over the last few months on a neighbouring construction site, was transported to the site by Riga-Mainz on three SPMTs (self-propelled modular transporters). The construction towered around 15 metres above the railway tracks when the SPMT modules came to a stop near the southern abutment of the bridge.

LR 1600/2 fitted with a total of 565 tonnes of ballast

The Liebherr LR 1600/2 crawler crane stationed at the opposite side supported around 190 tonnes of the bridge's weight with a radius of 42 metres. To enable it to do this, the large crane was assembled with a derrick boom, ballast trailer and counterweights

totalling 565 tonnes. An SPMT module positioned at an angle under the other end of the bridge shouldered the rest of the massive load of around 230 tonnes. The steel construction was moved at a diagonal in this constellation, hoisted almost fully over the track and placed on two temporary pillars positioned on the same side as the crawler crane.

By the second night of the job, the team from Riga-Mainz had also assembled the latest addition to the company's crane fleet in addition to an LTM 1500-8.1. The Liebherr LTM 1450-8.1 mobile crane had to show what it could do tackling one of its very first jobs.

LTM 1450-8.1 gets very close to matching the performance of the LTM 1500-8.1

With a gross load of around 110 tonnes, the 450-tonne crane had to manage approximately the same load case as the larger mobile crane – albeit with a slightly smaller radius. Crane driver Fred Wunsch is delighted with his new crane: "Very easy to operate – just brilliant." In total an impressive 430 tonnes were supported by the three crane hooks when the bridge was hoisted off the SPMT module and the temporary supports and finally moved six metres and positioned on the abutments.

Company boss Uwe Langer says there were several reasons behind the purchase of the new 450-tonne mobile crane. "The crane has the longest boom in its class at 85 metres, more than outstanding lifting capacity values and a transport weight which is absolutely perfect," says Langer about his purchase. "But it gets very close to the performance of the LTM 1500-8.1, so it also delivers excellent value for money. Furthermore, VarioBallast® and VarioBase® mean that the LTM 1450-8.1 is suitable for a range of very flexible jobs." Langer has one more reason for his buy: "And, of course, it's a Liebherr."

Captions:

liebherr-ltm-1450-8-1-ltm-1500-8-1-riga.jpg

VarioBallast® – the LTM 1500-8.1 fits the base plate for the variable ballast on the new 450-tonne crane during its assembly. The counterweights can be moved within a radius of five to seven metres.

riga-mainz-concept.jpg

Clever – the alternative concept developed by Uwe Langer (Riga-Mainz) using three cranes and SPMTs was preferred to the pushing method which was originally planned.

liebherr-lr-1600-2-ltm-1450-8-1-ltm-1500-8-1-riga.jpg

A total of 430 tonnes are suspended from the booms of the three Liebherr cranes.

liebherr-night-lr-1600-2-ltm-1450-8-1-ltm-1500-8-1-riga.jpg

Almost there – the LTM 1450-8.1 can be seen in the foreground during the last phase of the bridge installation. The SPMT can just be seen between the mobile cranes and the abutment.

Contact person

Wolfgang Beringer

Telephone: +49 7391 502-3663

Email: wolfgang.beringer@liebherr.com

Published by

Liebherr-Werk Ehingen GmbH

Ehingen / Donau, Germany

www.liebherr.com