

Impressive simultaneous job on the banks of the Rhine – Two Liebherr mobile cranes shorten giant electricity pylons near Voerde

- Two fully equipped LTM 1500-8.1 mobile cranes deployed
- Rehanging the power lines required synchronous work by the cranes
- The 138-metre-high overhead transmission masts were once among world's tallest

Ehingen / Donau (Germany), September 2015 – Specialists from heavy load logistics provider and crane operator Wasel in Bergheim completed an impressive job in the summer on the Rhine near Dinslaken using two Liebherr LTM 1500-8.1 mobile cranes. Two 138-metre-tall electricity pylons had to be shortened and their mastheads rebuilt. In addition to their own 500-tonner, Wasel deployed another LTM 1500-8.1 from Cologne-based crane rental company HKV Schmitz + Partner to complete the job, which required simultaneously working on both sides of the river.

At the time of their construction in 1926, the masts of the “Rhine Overhead Transmission Line Crossing Voerde” were among the tallest electricity pylons in the world, spanning the Rhine over a distance of more than 500 metres. Contrary to its original plans, grid operator Amprion decided to redevelop the nearly 90-year-old Rhine crossing when a new power line, which had been planned for years, was beset by severe delays.

The two LTM 1500-8.1s had to complete the first part of the work simultaneously. Before dismantling the upper cross-beams, the transmission lines were simultaneously detached from both masts and slowly lowered to a height of around 50 metres, before being temporarily suspended on the masts' framework structures. Shipping traffic on this section of the river had been completely suspended for this phase of the work.

Afterwards, industrial climbers and crane crews worked for two days to dismantle the old mastheads and steel framework, and to erect the new mastheads at a height of almost one hundred metres. During the work, the two mobile cranes were pushed to the limits of their lifting capacities – the planned reserve had to be fully utilised. “The

corner posts of the masts had significantly more mass than the calculations predicted,” said Björn Kröger, project manager at Amprion. “Nevertheless, all lifts proceeded as planned, only the burn-through of the steel structure took more time than expected.” Kröger also expressed his complete satisfaction with the professional and highly impressive operation of the cranes: “The Wasel company performed superbly here.”

On this section of the river, the overhead transmission lines (which are now running lower) must always be at least 21 metres above the Rhine's peak water level. Which was why the masts were originally built so high, explained Björn Kröger: “In anticipation of huge sailing ships, the high-voltage line was cautiously situated at such a great height over the Rhine in the 1920s.”

Caption

liebherr-mobile-crane-ltm-1500-8-1-wasel-power-pole.jpg:

Wasel's crane was positioned by the electricity pylon on the right bank of the Rhine. HKV's Liebherr mobile crane is in the background.

liebherr-mobile-crane-ltm-1500-8-1-hkv-luffing.jpg:

Always impressive – the 91-metre luffing jib of the LTM 1500-8.1 re-hangs the transmission lines.

liebherr-mobile-crane-ltm-1500-8-1-detail.jpg:

Hard work at high altitude: the corner pillars of the nearly 90-year-old electricity pylon proved to be stronger than calculated and were severed using cutting torches.

liebherr-mobile-crane-ltm-1500-8-1-hkv-power-pole.jpg

The first section of the old masthead hangs from the hook of the HKV Schmitz + Partner crane at a height of around 140 metres.

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Published by

Liebherr-Werk Eching GmbH

Eching / Donau, Germany

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