

Liebherr mobile crane dismantles the last construction crane on Hamburg's Elbe Philharmonic Hall from a jack-up platform

- LTM 1750-9.1 from Thömen is set up completely on a jack-up platform and towed to its place of use
- The sensitive control of the LTM 1750-9.1 enables it to operate precisely with a hook height of 127 metres
- Jack-up platform provides a safe crane location regardless of water level

Ehingen / Donau (Germany), 11 January 2016 – The Elbe Philharmonic Hall, a future concert hall and architectural highlight in the Port of Hamburg, can now be seen without any construction cranes for the first time since building work began in 2007. Hamburg-based crane and heavy haulage contractor Thömen used a Liebherr LTM 1750-9.1 mobile crane to dismantle the last of the four large top-slewing cranes which for years have dominated the skyline at the former quay warehouse. A demanding job completed in front of an imposing harbour backdrop.

Thömen's Project Manager Jörg Marahrens was given the difficult logistic challenge of removing the final construction crane from the Elbe Philharmonic Hall. The crane erected on the south-west façade of the building had to be dismantled from the River Elbe. Seven years previously this construction crane had been erected from a pontoon despite the fact that the river in the Port of Hamburg is tidal. At that time an LTM 1500-8.1 from Thömen was used. The dismantling work had to be completed by a more powerful mobile crane from a fixed jack-up platform since the crane, directly attached to the building, now was around 120 metres high. It had been climbed downwards until the boom could just still be slewed over the edge of the building. Furthermore, a larger crane would be able to remove several tower sections from the crane on its hook with each hoist so that the work could be completed more quickly.

The most powerful crane in Thömen's mobile crane fleet, the Liebherr LTM 1750-9.1, was able to provide the required performance parameters for this rather unusual job.

The nine-axle mobile crane was erected and prepared for the job at Burchardkai, in the west of the Port of Hamburg, on a jack-up platform measuring 75 metres in length.

114 tonnes of ballast, a 19 metre telescopic boom extension and a 66 meter luffing jib were required to achieve the required hook height of 127 metres. The equipment on the jack-up platform, the crawler crane stationed on it and the legs towering upwards left very little space for the Thömen team to set up the crane. A Liebherr LHM 320 mobile harbour crane stationed at the quay completed part of the erection work for the luffing jib.

Two tugs towed the platform with the crane upstream through the Port of Hamburg for around one hour to the site. The distance was around ten kilometres, passing the old Elbe Tunnel, the St Pauli Piers and the dry docks of the massive Blohm+Voss shipyard.

Immediately in front of the Elbe Philharmonic Hall, the jack-up platform pushed its enormous legs into the river bed to raise the platform to the water level of the high tide. This meant that the crane work could be completed without any hindrance from the tides or the bow waves from passing shipping.

The two crane drivers, Jens Kohlmorgen and Ralf Ramm, had to exercise great caution and work very precisely when dismantling the construction crane which was just three metres away from the glistening glass façade of the concert hall. After removing the ballast blocks and the boom, however, the wind speed increased which meant that the work had to be stopped for several days. Problems with undoing the crane bolts after seven years caused an unexpected delay in the removal of the crane and meant that the timeframe with ideal weather conditions which should normally have sufficed for the work had to be extended significantly.

The Liebherr LTM 1750-9.1 mobile crane has now progressed to be a firm favourite at Thömen. Three of the large modern cranes from the Ehingen Plant are stationed at outlets in Leipzig and Potsdam and at the headquarters in Hamburg. "These cranes are mainly used for erecting wind farms", explains Marc Bernschneider, a member of the external sales team at Thömen. "Our first one went straight from Ehingen to wind

power work and was then in use without a break for nine months until its first service. The crane is simply unbeatable for erecting wind turbines."

Caption

liebherr-ltm-1750-9-1-thoemen-hamburg.jpg

Almost finished: Thömen's LTM 1750-9.1 removes the last construction crane from the Elbe Philharmonic Hall in the Port of Hamburg with an impressive hook height of 127 metres.

liebherr-ltm-1750-9-1-counterweight.jpg

Getting ready for the journey: The large mobile crane is prepared with ballast on a jack-up platform.

liebherr-ltm-1750-9-1-luffing-jib.jpg

A Liebherr LHM 320 mobile harbour crane helps with erecting the luffing jib.

liebherr-ltm-1750-9-1-platform.jpg

A rare view: The jack-up platform travelled around 10 kilometres through the port.

liebherr-ltm-1750-9-1-platform-2.jpg

Almost there: The tug and platform combination, here around level with the old Elbe Tunnel.

liebherr-ltm-1750-9-1-facade.jpg

Unmistakable: Far side of the future concert hall.

liebherr-ltm-1750-9-1-bottom-up.jpg

On the hook: The 60 metre trolley boom was removed in two sections. (Photo: Marc Bernschneider/Thömen)

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