

Press release

Liebherr mobile crane helps place explosives at a height of 140 metres

- LTM 1650-8.1 meets tight schedule using maximum set-up configuration and VarioBallast®
- Crane proves its worth helping to place explosives to demolish coal-fired power station
- Large radii and hoist heights of up to 140 metres completed from a single location
- Emergency take down unit for platforms at the ready

Two sites from a single location – whilst preparing explosives to demolish a coal-fired power station in Lünen, North Rhine-Westphalia, the Liebherr mobile crane was working on another site at the same time due to high time pressure. Fitted with a luffing lattice jib with a maximum length of 91 metres, the new LTM 1650-8.1 from Bergheim-based crane contractor Wasel GmbH had to hoist explosives experts up to a platform on the chimney of the decommissioned power plant at a height of 140 metres. Façade components on the boilerhouse also had to be removed at the same time using radii of up to 80 metres.

Lünen (Germany), 25 June 2021 – For crane operator Michael Müllers, this job with his new Liebherr crane was not exactly a comfortable one. The experienced crane operator in the cab of the LTM 1650-8.1 had to work on two sites at the same time for this demolition project. At the foot of the 250 metre chimney at the former coal-fired power plant, the crane was responsible for hoisting the explosives crew together with their drilling gear and explosives up to a work platform on the flue at a height of around 140 metres. Once there, they placed around 30 kilograms of explosives in 140 boreholes. As a result of its enormous height, the giant chimney could not simply be demolished by placing explosives at its base, and instead it had to be demolished using a single-folding method.

Required flexibility delivered by VarioBallast®

The Liebherr crane had a total of 145 tonnes of slewing platform ballast to enable it to support the demolition work on the façade of the neighbouring building from the same location. Using its 91 metre luffing lattice jib, it was able to reach even the furthest points to help dismantle the façade. A large platform which held a team of workers and the salvaged material was hoisted in full over the neighbouring 70 metre high building. The platform was then used on the other side of the building at radii of up to 80 metres. The safety cage, personnel and demolition material created a gross load case of around eight tonnes for the powerful mobile crane with its impressively long luffing jib. To manage this large radius, Michael Müllers set the radius of the slewing platform ballast to the maximum value of 8.4 metres. For working on the chimney with radii of around 45 metres, the ballast distance simply had to be reduced to 6.4 metres using the hydraulic slewing mechanism.

Mandatory equipment – hydraulic unit for emergency take down

A hydraulic unit was also on the site in the immediate vicinity of the crane in case of emergency. When working with safety cages and work platforms on the crane hook, a unit of this type is mandatory so that if the crane engine suffers a failure, the safety cage can be lowered safely at any time. However, it was not needed on the former power plant site. The crane, which, in fact, also has an integral emergency take down system of its own, functioned perfectly throughout the job which lasted several weeks.

After around six months in the operator's cab of the LTM 1650-8.1, crane operator Michael Müllers is extremely satisfied with his new machine. Wasel GmbH is based in Bergheim near the River Rhine and, in addition to crane work, also provides heavy logistics, tower cranes and industrial assembly services. To date, the company has mainly used its new crane in refineries, for handling heavy goods and for jobs in industry. "The crane's handling is really good, particularly setting it up," says a delighted Müllers about the ease of use of the modern mobile crane. "And as far as lifting capacities are concerned, it represents a real quantum leap forwards. It's a fantastic machine."

About Liebherr-Werk Ehingen GmbH

Liebherr-Werk Ehingen GmbH is a leading manufacturer of mobile and crawler cranes. Its range of mobile cranes extends from 2-axle 35 tonne cranes to heavy duty cranes with a lifting capacity of 1200 tonnes and a 9-axle chassis. Its lattice boom cranes on mobile or crawler crane chassis deliver lifting capacities of up to 3000 tonnes. With universal boom systems and extensive additional equipment, they can be seen in action on construction sites throughout the world. The Ehingen site has a workforce of 3,600. Extensive, global service guarantees the high availability of Liebherr mobile and crawler cranes. In 2020, the Liebherr plant in Ehingen recorded a turnover of 2 billion euros.

About the Liebherr Group

The Liebherr Group is a family-run technology company with a widely diversified product range. The company is one of the largest manufacturers of construction machines in the world, but also supplies technically advanced, user-focused products and services in many other sectors. The group currently comprises more than 140 companies based in every continent of the world, has a workforce of around 48,000 and recorded a consolidated total turnover of more than 10.3 billion euros in 2020. Since it was founded in 1949 in Kirchdorf an der Iller in southern Germany, Liebherr's aim has been to win customers by supplying high quality solutions and to contribute to technological progress.

Photographs:



liebherr-ltm-1650-8-1-wasel-luennen-motive1.jpg

Straight up – the LTM 1650-8.1 transports the crew to place the explosives to a platform at a height of 140 metres.



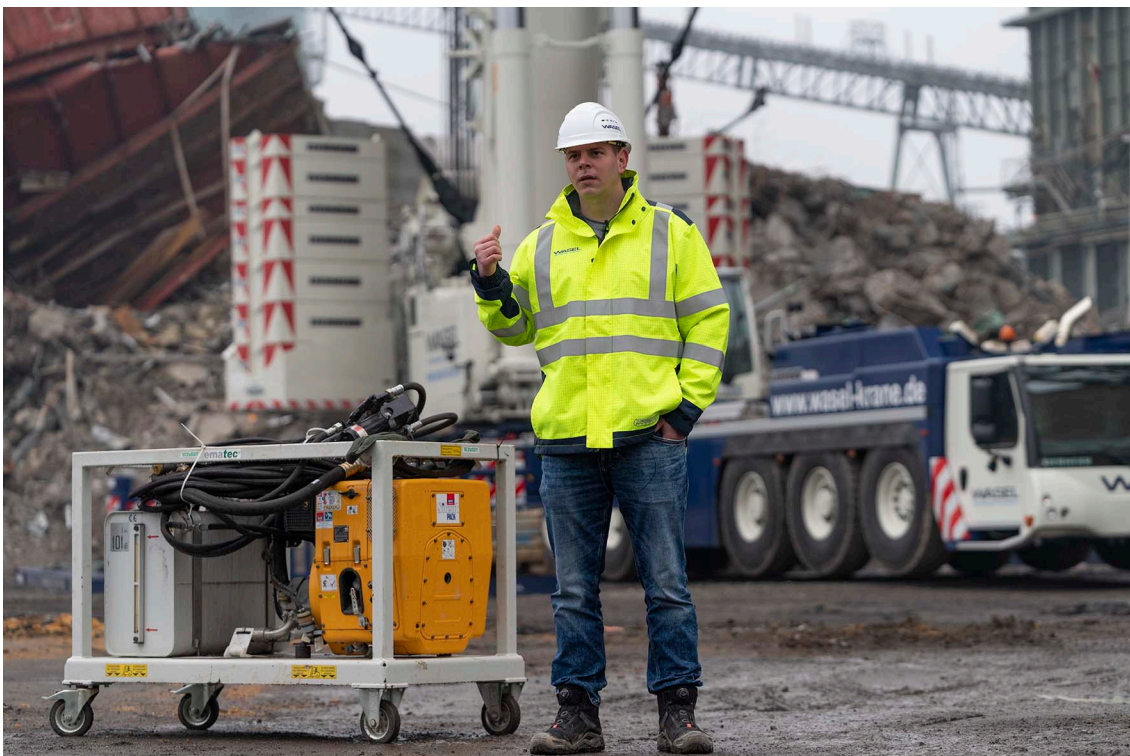
liebherr-ltm-1650-8-1-wasel-luennen-motive2.jpg

Dizzying height – secured with fall arrest equipment, the explosives experts climb onto their platform at a height of 140 metres.



liebherr-ltm-1650-8-1-wasel-luene-motive3.jpg

Large range – to remove the façade cladding, the mobile crane hoisted the safety cages over the entire building using a 91 metre luffing lattice jib.



liebherr-ltm-1650-8-1-wasel-luene-motive4.jpg

In case of emergency – Project Manager Maurizio Ising explains how the hydraulic unit works to enable the safety cage on the crane's hook to be lowered at any time if the crane's engine suffers a failure.



liebherr-ltm-1650-8-1-wasel-luenen-motive5.jpg

“Really good” – Wasel’s crane operator Michael Müllers is extremely satisfied with the handling and set-up times of the new crane. But he saves his main praise for the lifting capacity values of the Liebherr LTM 1650-8.1.



liebherr-ltm-1650-8-1-wasel-luenen-motive6.jpg

The end of a giant chimney – the flue on the former lignite power station in Lünen was 250 metres high. This imposing landmark in the Ruhr region has recently vanished. (Photograph: Hagedorn Management GmbH)

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