

600 ton crawler crane positions a reactor of 520 tons.



A heavy-duty lift out of the ordinary was performed at a refinery in Schwedt on the river Oder, close to the Polish border. A team of the Austrian Felbermayr group proceeded with the Liebherr heavy-duty crawler crane LR 1600/1 to the site in order to position a

reactor of 520 tons. On the occasion of this job, the capacity of the 600-tonner was demanded to the maximum. "The machine precisely managed what we did expect from a crawler crane" Klaus Ruhland, project manager, summarized the intervention.

Subject to modifications.

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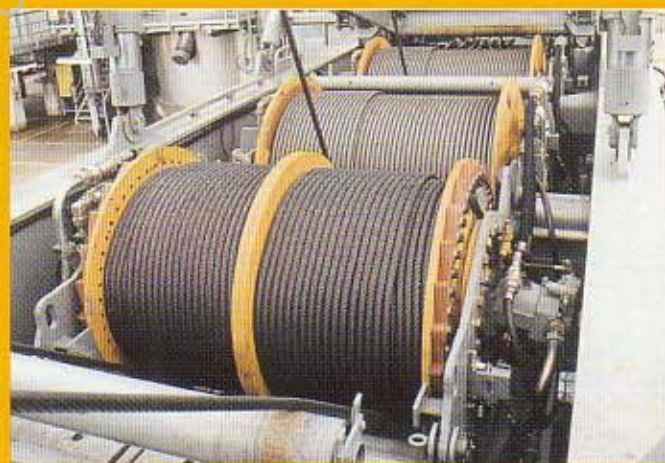
The better crane.



Operation with SDBW equipment.

After a short erection time at the job site, the crawler crane was operative after being equipped with a 56 m long main boom, a 31.5 m derrick boom and the counterweight trailer. At first, the reactor, located on a self-propelled loader with tilting frame, was raised into the vertical position and taken on the hook at a crane radius of 16 m. The gross load during that procedure was 547 tons. The radially telescopic counterweight trailer, which carried a partial ballast of 350 tons of its total capacity of 400 tons during the entire lifting procedure, proved to be a great advantage. During the lift with changing crane radius, the counterweight trailer was

extended from 15 m to 18 m radius to the rear by telescopic guiding devices in order to increase the countermoment. Consequently, the time consuming loading and unloading of ballast required on a traditional counterweight trailer was unnecessary. Subsequently, the reactor suspended on the crane's hook at a radius of approx. 14 meters, was displaced to its erecting location at distance of almost 8 meters without any problem. During the positioning of the 44 m high reactor, which had a diameter of 5 meters, the 600-tonner had the load of 547 tons on the hook which it placed at a radius of approx. 14 meters. With 350 tons derrick ballast and 95 tons central ballast as well as 220 tons ballast on the superstructure, the LR 1600/1 was rigged with a total ballast of 665 tons.



Operation with SDWVBW equipment.

Three weeks later, the 600-tonner was ready for action at the MIRO refinery in Karlsruhe for a similar job. A reactor of almost the same type had to be positioned. The height difference between the crane's operating position and the location of erection of the reactor required the additional application of the heavy-duty jib. Thus, the LR 1600/1 presented itself at the construction site with a 42 m long main boom and the heavy-duty jib of 42 meters length. Following a slight lift of the reactor, which had to be positioned into a gasoil desulphurating plant, a displacement of the crane by almost 12 meters with the load of 530 tons was necessary.

Crane operator Ernst Haselhofer was very pleased with the handling facility and the performance of the LR 1600/1:

"The compactness of the crane is super, and moreover, it can easily be erected!"

Equally the operation manager, Klaus Ruhland, praised the crawler crane:

"A top-class machine. The crane turned out very well as far as logistics are concerned not only in respect to transportation but also for slinging the individual crane sections. Particularly the numerous slinging rings demonstrate that due consideration had already been applied during the design phase. Physical work is essentially facilitated and the erection times are reduced."

The transport width of all structural components of the crane does not exceed three meters. The entire travel drive is located within the crawler track pads of 1.5 meters width; this compact design is particularly appreciated by pros.

Job data.

Crane:	Liebherr crawler crane LR 1600/1
Equipment:	SDBW or SDWVBW 56 or 42 m main boom (S) 31.5 m derrick boom (D) 14 m heavy-duty lattice boom jib (WV) at 12° 95 t central ballast 220 t superstructure ballast counterweight trailer (BW) with 350 t, radius 15 m - 18 m
Crane radius:	up to 16 m
Load:	reactor of 520 t diameter 5.3 m, length 44 m gross load 547 t



LR 1600/1 travels with 547 tons on the hook.