

600-ton crawler crane on major job.



For the teams of crane operators Riga-Eisele, Mainz and Frankfurt as well as for the heavy-duty experts of Messrs. Baumann, Bornheim, it was a project of the superlatives: The transport of a reactor of 450 tons with a length of 32 meters from Mannheim to Neustadt on the river Danube as well as the subsequent positioning

of the steel cylinder at the refinery. In order to lift this immense load, the Liebherr crawler crane LR 1600/1 was put into action. This huge machine was assisted by a small crane fleet consisting of the Liebherr LTM 1500, LTM 1100/2 and LTM 1200/1, the new 200-tonner.

<http://www.hydro-crane.com/>

Subject to modifications TP 332, 4.02

Please contact us
LIEBHERR-WERK EHINGEN GMBH, Postfach 1361, D-89582 Ehingen
 ☎ (0 73 91) 5 02-0, Fax (0 73 91) 5 02-33 99
 www.lwe.liebherr.de, E-Mail: info@lwe.liebherr.com

LIEBHERR

The better crane.

Operation with SDB equipment.

In mid-February, when the enormous reactor had reached its final destination at the BAYERNOIL refinery in the Bavarian town of Neustadt, the men of the teams who took part in this important project, had completed three strenuous weeks. The preliminaries to this spectacular transport task took place in the Mannheim harbour where the reactor, manufactured for the desulphuration of Diesel fuel, was loaded on board of a barge. The short distance transport to the quay on the Scheuerle self-propelled carriages type SPMT gave both men on the steering gears of the special vehicles, Riga boss Uwe Langer and Carsten Gebser of the Baumann team, a foretaste of the almost 40 km long distance from the harbour in Kehlheim to the refinery at Neustadt which the heavy-duty transport still had to face on the overland route.



The loading of the reactor at the Mannheim Rhenania harbour proceeded smoothly: Equipped with 35-meter main boom and derrick boom as well as with a special crossbeam especially manufactured for that particular purpose, the Liebherr crawler crane LR 1600/1 of Riga-Eisele was awaiting its lift. To handle the gross load of 493 tons at a maximum radius of 13.4 meters, the 600-tonner was equipped with a total counterweight of 565 tons. The crawler version of the crane was required for this job as the crane had to be displaced up to the quay with the reactor on the hook to load it onto the barge.



Positioned between the crane and the quay wall, the self-propelled carriages were released of their load when the LR 1600/1 had picked up the stainless steel reactor. Subsequently, the harbour edge was covered with load distribution plates to withstand the high pressure of the crane with its suspended load when it lowered the reactor onto the barge. The precise controls of the LR 1600/1 enabled exact positioning on the supporting devices in the barge without any problem.



Outstanding precision during load handling.

A successful completion of the load handling and logistic masterly performance was the positioning of the reactor at its location on the premises of the BAYERNOIL refinery in Neustadt. By a tandem lift with a Liebherr mobile crane LTM 1500/1, the 600-tonner crawler crane – now equipped with 49 heavy-duty boom – lifted the reactor from the self-propelled carriages, took over step by step the load, while the reactor moved slowly towards the mobile crane. The additional ballasting was taken care of by the LTM 1100/2 which increased the counterweight on the suspended pallet of the huge crane from 130 to 230 tons. At the other end, the 500-ton telescopic crane was holding the bottom part of the reactor at a maximum radius of 6 meters. The mobile crane was equipped with 16.1 meter main boom and 135 tons superstructure ballast. The LR 1600/1 provided with a total of 545 tons counterweight while it had the reactor of 450 tons alone on the hook, now without transport saddle. With a gross load of 465 tons – 13 tons alone was the weight of the hook and 2 tons that of the lifting tackle – the crawler crane had to be subsequently displaced by almost 20 meters during slewing in order to position the reactor. And during the transport, Uwe Langer at the joystick of the crane again demonstrated his sure instinct and the participating teams a high degree of precise co-operation and professionalism.

Job data:

Crane:	Liebherr crawler crane LR 1600/1
max. lifting capacity:	600 t at 12 m radius
Equipment:	SDB 42 and 49 m respectively main boom (S) 31.5 m derrick boom 95 central counterweight 220 t superstructure ballast 230 t suspended counterweight, up to 18 m radius
Crane radius:	up to 20 m
Load:	Reactor of 450 t Diameter 6.5 m, length 32 m Gross load 493 t

Riga-Eisele-Baumann masterly mee