

# "Big Lift" for Liebherr crawler crane in Hamburg harbour.



The Hamburg harbour has been the scene and skyline for a spectacular lift performed by the teams of the crane rental companies "Mobile Hubtechnik and Grohmann Attollo", both from Berlin. For the theater tent opposite to the piers, which is currently being transformed for

the musical "The Lion King", the top section of the stage tower had to be positioned. The 115 tons partially cased steel construction had been manufactured adjacent to the theater tent during the previous months and was now awaiting to be lifted into the tent.

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## Short rigging times during crane erection.

It was mainly due to the restricted area and the impressive radius of almost 38 meters which required the operation of the Liebherr crawler crane type LR 1400/1. As fixed-installed cooling units were in the way for picking up the load, the crane had to be displaced at the same time it was slewing with the enormous load on the hook.

The Berlin teams arrived at the site with 14 low loaders. Only after one day's assembly time, the LR 1400/1 with 63 meter heavy-duty boom and 28 meter derrick boom as well as with a total of 178 tons central and superstructure ballast was ready to lift the stage tower.



## Outstanding precision during load handling.

After the hook tackle had been attached, a 160 t Liebherr mobile crane placed 180 tons suspended counterweight sequentially on the heavy-duty crawler crane before the stage tower with the considerable dimensions of 21.5 m length, 12.5 m width and 15 m height was hanging in mid-air over the Hamburg harbour scenery. With a gross load of 119 tons on the hook, the crane was subsequently displaced twice by approx. 12 meters in order to turn the giant cube by 180° at a height of 30 meters and to position it over the theater tent. The positioning of the steel construction required utmost concentration of the crane operator, Michael Kuhnert, but above all, a lot of sensitivity. While the stand-by mobile crane LTM 1160/2 increased the counter-

# LR 1400/1 travels with 115 t stage tower on the hook.



weight on the suspended pallet of the crawler crane to 240 tons, the stage tower was positioned precisely over four pillars at a radius of 37.5 meters. During that operation, the suspended counterweight had been extended hydraulically to the max. radius of 15 meters from the centre of the slewing rim. For this "Big Lift", the LR 1400/1 was equipped with 418 tons total counterweight and charged to its capacity.

The last part to position and ancre the section was outstanding precision work as a margin of just a few centimetres allowed the stage tower to be moved. Thanks to the precise team-work of the specialists at the construction site, the spectacular lift of the 115 t stage tower was performed to schedule. The entire transformation work of the theater tent is planned to be completed by early December. Then the "The Lion King" can start roaring in Hamburg harbour every night.

## Job data.

**Crawler crane:** Liebherr LR 1400/1

**max. load capacity:** 400 t bei 4.5 m Ausladung

**Equipment:** 63 m heavy-duty boom "S"  
28 m derrick boom "D"

**Superstructure ballast:** 135 t

**Central ballast on the crawler:** 43 t

**Derrick ballast:** max. 240 t

**Radius:** max. 37.5 m

**Stage tower:** 115 t

**Dimensions:** L 21.5 m, W 12.5 m, H 15 m

**Particularities:** Extremely restricted working area, displacement with load, LR 1400/1 charged to its capacity



