

Job Report

Duty Cycle Crawler Crane

HS 8100 HD with Slurry Wall Grab



LIEBHERR

Barcelona
Spain



Situation

With nearly 40 million passengers per annum, Barcelona-El Prat is the second largest airport in Spain after Madrid and is also one of Europe's most important hubs. Continuous improvements are being made to the airport infrastructure in

order to cope with the increasing number of passengers. The work includes, among other things, the linking of the new airport to the suburban railway.

Task

Three duty cycle crawler cranes from Liebherr were used between February and August 2016 to make an access shaft for the later application of a tunnel drilling machine and to erect support walls for the railway, which is partly underground. Among them were two new HS 8100 HD and one older model, type HS 873 HD. All three machines, belonging to the Spanish construction com-

pany Terratest, were equipped with mechanical slurry wall grabs of the type K810 from the company "Stein HT". The total length of the slurry wall in this section was about 1,000 m with depths up to 30 m and a thickness of 1,200 mm. The soil on the jobsite, which is in close vicinity to the sea, consisted of alternate layers of sand and gravel.

Solution

The duty cycle crawler cranes worked in shifts, Monday to Friday from 06.00 to 24.00 hours, and erected approximately 1,300 m² of slurry wall each per week. The new machines, type HS 8100 HD, proved to be exceptionally efficient. According to the customer, the diesel consumption of the HS 8100 HD was up to 30% less than that of a similar machine. This is achieved, above all, through the optimized hydraulic system. As a result the ma-

chine is able to attain a higher turnover level in comparison to its predecessor, despite reduced engine power of 390 kW / 523 hp. Furthermore, both HS 8100 HD machines convinced with their modern and reliable safety concept. They are equipped with modified roof railings and ladders, as well as additional walkways. These are foldable making the machine extremely easy to transport.

Technical Data: HS 8100 HD – Slurry Wall Grab

Engine power:	390 kW / 523 hp
Max. lifting capacity:	100 t
Max. winch line pull:	2 × 275 kN

Line speed first layer:	0 – 96 m/min
Max. chisel weight:	12/16 t
Operating weight:	89 t