

**Job Report**

Duty Cycle Crawler Crane

**HS 8100 HD with Slurry Wall Grab**



**LIEBHERR**



## Situation

The Suez Canal in Egypt, which was opened in 1869, is one of the most important trade routes worldwide and connects the Mediterranean Sea with the Red Sea. In the past decades various expansion works and infrastructure measures have been undertaken. In the course of a current project new tunnels are being built near Port Said in North Egypt and also

further south at Ismailia. The project also includes the widening and deepening of the existing shipping lane of the canal, as well as the construction of a completely new lane, with a length of approximately 35 kilometres, in the northern section. The total investment volume amounts to approximately 4 billion US dollars.

## Task

Between September 2015 and summer 2017, slurry walls with a total area of about 520,000 m<sup>2</sup> are being erected as part of the building work for the two tunnels at Port Said. The slurry walls are situated to both the east and the west of the Suez Canal for access roads, as well as shafts for subsequent tunnel excavations. Two work groups are involved in this project. Züblin AG and Orasom Construction form one group and

Trevi S.p.A. forms the second group together with an Egyptian construction company. The companies involved in the construction work are using no less than nine Liebherr duty cycle crawler cranes (4 x HS 885 HD, 2 x HS 875 HD, 1 x HS 855 HD, 1 x HS 845 HD and 1 x HS 8100 HD) as well as one Liebherr crawler crane type LR 1160.

## Solution

The slurry walls are about 1.2 metres wide and between 20 and 70 metres deep. The soil consists of approximately 80% clay and only the last 5 to 6 m are sand. For producing the slurry walls Züblin AG is deploying a HS 8100 HD and, therefore, a Liebherr duty cycle crawler crane of the newest generation. It is equipped

with a hydraulic slurry wall grab from Leffer. Using the hydraulic slurry wall grab, the work can be carried out more precisely over the whole depth than with a mechanical slurry wall grab. The Liebherr machine convinces thanks to its low fuel consumption, requiring a mere 16 litres of diesel per hour.

### 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

Max. boom length in grab operation:	32 m
Max. chisel weight:	12/16 t
Operating weight:	89 t