

Highest precision: Liebherr Duty Cycle Crawler Crane Shows Great Skill on Prehistoric Ground

- HS 8100 HD fitted with grab installs slurry walls
- Archaeological excavations during the construction work
- Prehistoric stilt dwellings and listed buildings within the jobsite

Nenzing (Austria) 5 February 2018 - Installation of slurry walls and archaeological excavations on one jobsite: this is the case in Zurich where a Liebherr HS 8100 HD is currently deployed. Due to this fact, the deep foundation work must be carried out with utmost care and highest precision.

The work involved in the redevelopment and new construction of the Zurich Insurance Group Ltd. headquarters on the Mythenquai in Zurich requires utmost care. The existing headquarters is surrounded by buildings from different eras. Three of them are listed in the art and cultural heritage protection catalogue. A particular challenge is the excavation of prehistoric stilt dwellings, which were found within the jobsite. Therefore, archaeological excavations are being carried out by Zurich's Department of Archaeology during the course of the construction work. The contractor must give the highest possible consideration to this fact.

This sensitive and historically interesting project was awarded to the company Implenia Switzerland AG which, since the takeover of Bilfinger Construction in 2015, belongs to the largest deep foundation companies in Europe. As this project requires utmost precision, the right choice of construction machine plays an important role. Implenia found the right choice in the Liebherr duty cycle crawler crane HS 8100 HD. "It is a modern machine with high load-bearing capacity and performance and at the same time it has low fuel consumption and compact dimensions. It is the key machine for us as far as slurry wall applications are concerned," explains Daniel Bucher, Head of Deep Foundation Applications at Implenia.

The duty cycle crawler crane is carrying out the current slurry wall work in Zurich using a grab. The slurry wall is 600 mm thick and 25 m deep. At times during the installation work the grab is working only 20 cm away from the facade of the listed buildings. This

requires highest accuracy from man and machine. The Liebherr machine impressively demonstrates its reliability and highest precision. "The operator is very satisfied with the handling of the HS 8100 HD," adds Daniel Bucher. Following the excavation of the slurry walls the reinforcement is inserted with the aid of the duty cycle crawler crane.

The ever-increasing size of slurry wall jobsites with heavier grabs and reinforcement cages poses increasing demands on the construction machines. Consequently, Implenia has replaced its existing 80-tonne duty cycle crawler crane with two HS 8100 HD, each with a load capacity of 100 tonnes. They will mainly be used for the installation of slurry walls and drilled piles, the drilling of filtering wells or vibro-flotation work.

The new Zurich headquarters should be opened in 2020 following a construction period of two and a half years. However, due to the excavation of the 3000 to 5000-year-old stilt dwellings delays cannot be entirely ruled out.

Captions

liebherr-HS 8100 HD-Implenia_1

Karl Suter, Head of Sales Deep Foundation Machinery at Liebherr-Baumaschinen AG, hands over the key of the new HS 8100 HD to Daniel Bucher, Head of Deep Foundation Applications at Implenia Switzerland AG.

liebherr-HS 8100 HD-Implenia_2

The HS 8100 HD in operation on prehistoric ground.

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