

Press Release

When once round the world just isn't enough

- First job for slurry wall cutter
- Highest demands in confined working space
- Duty cycle crawler crane HS 8130 as universally applicable carrier machine

The Deutsche Bahn [German Railway] is extending the suburban railway network in Munich. One of the central entrances to the second core line is being built at Marienhof in the Altstadt. Six Liebherr machines are in operation for this development. Even the high demands for the realization of this project cannot shake the new slurry wall package.

Nenzing (Austria), May 2020. Every day it rattles once round the earth and even further. The equivalent, at least. The distance covered by the suburban railway in Munich is staggering. It was opened for the Olympic Games in 1972 and has now reached its limits. The old lady will find her feet again thanks to the expansion of the rail network, Munich's largest construction project for the coming years.

In order to cope more efficiently with the bustling stream of passengers in the inner city the Deutsche Bahn is building a second core line between the stations Laim and Leuchtenbergring. A central entrance to the tunnel is in the Altstadt at Marienhof. Here the joint venture VE 41 comprising Implenia and Hochtief is carrying out slurry wall work using Liebherr equipment.

High demands

The challenges lie in the large dimensions of the slurry walls and the extremely confined space on the construction site. Due to the partially historical buildings in the immediate surroundings an application with low vibration is necessary for the installation of the slurry walls. But at the same time it must also meet the high demands for compactness and verticality. The contractor found the correct equipment in the brand-new Liebherr slurry wall cutter type LSC 8-18 L.

The cutter's high weight, high cutter frame and low centre of gravity provide the optimum basis to achieve the necessary verticality. Maximum process safety is achieved through the full integration of the verticality measurement in the Liebherr control system. Furthermore, 12 independently controllable steering flaps can correct the cutting direction should any possible deviations occur. The actual position of the flaps is displayed in real time on the monitor in the operator's cab. In order to deal with the confined spaces of urban construction sites, the cutter can be positioned over the bite using a continuous hydraulic turning device.

The new equipment from Liebherr cuts its way through 33 m³ of soil per hour and requires 8 hours for a primary trench. A total of 108 trenches measuring 1500 x 3200 mm with 30 cm overlap must be installed on the construction site in Munich.

In addition to the cutter, the hydraulic slurry wall grab, type HSG 5-18, is in operation. It is also fitted with verticality measurement and a turning device for the frame and is mainly used for the initial excavation of the trenches.

Complete Package

The carrier machine for both the grab and the cutter is a duty cycle crawler crane type HS 8130. Its excellent stability in combination with the largely dimensioned winches make the HS 8130 the perfect basis for such heavy equipment.

The joint venture is using the separation plant SPC 600 C, which Liebherr offers as part of a complete package for slurry wall applications. The package also includes grab, cutter and duty cycle crawler crane. The plant can process up to 600 m³ support fluid including excavation material per hour. In addition to the two duty cycle crawler cranes with slurry wall cutter and grab respectively, the drilling rigs type LB 24 and LB 44 are also working on the cramped site for the expansion of the suburban line. Further, the crawler crane type LR 1250 lifts the reinforcement cages into place, each of which weighs up to 55 t and is 55 m high.

The second core line is scheduled to open in 2028. Then the Munich Lady can rattle her way along even more tracks than before. Because once round the world isn't enough.

Animation of the slurry wall cutter LSC 8-18:

<https://www.youtube.com/watch?v=rQKkMd9Xos8>

Animation of the slurry wall grab HSG 5-18 C/L:

<https://www.youtube.com/watch?v=aL-PITM28GE>

Animation of verticality assistant:

<https://www.youtube.com/watch?v=Wy5gtzT6IGU>

Pictures



liebherr-cutter 1.jpg

The slurry wall cutter at its premiere in Munich.



liebherr-cutter 2.jpg

The crawler crane LR 1250 lifts the reinforcement cages into place.

Contact

Gregor Griesser

Strategic Marketing and Communication

Email: gregor.griesser@liebherr.com

Wolfgang Pfister

Head of Strategic Marketing & Communication

Tel.: +43 50809 41444

Email: wolfgang.pfister@liebherr.com

Published by:

Liebherr-Werk Nenzing GmbH

Nenzing / Austria

www.liebherr.com