

Harbour Dredging: Hybrid Duty Cycle Crawler Crane with 300 t Capacity in Operation in Piombino

- Dredging operation with 22 m³ grab in the Port of Piombino
- Removal of 600,000 m³ material during a six-month project
- Hybrid drive system Pactronic® convinces with higher performance and lower diesel consumption

Nenzing (Austria) 10 October 2017 - The currently largest duty cycle crawler crane type HS 8300 HD from Liebherr is presently carrying out dredging work in Piombino. The aim of the project is to remove deposited sediment from the mouth of the port and also to increase the depth of the water. For this purpose the hybrid duty cycle crawler crane is equipped with a hydraulic clamshell grab with a filling capacity of 22 m³.

Green Light for Shipping Traffic

With its impressive capacity of 300 t the HS 8300 HD from Liebherr is one of the largest duty cycle crawler cranes worldwide. Since this summer the powerhouse is carrying out dredging work in the Port of Piombino. In recent years the depth of the water at the mouth of the port has been reduced to as little as 8 m through sediment. The work not only involves the removal of the sediment. The depth of the water will also be increased to 14 m in order to allow for larger vessels to run into the port. The importance of trouble-free shipping traffic is underlined by the fact that more than three million passengers per year pass through the port on their way to the Tuscan Archipelago, Sardinia or Corsica. The work in Piombino is being carried out in a six-month project by the Italian dredging specialist Zeta S.r.l.

Great Tasks Require Great Machines

Material amounting to a total of 600,000 m³ must be removed from the entrance to the port. With the duty cycle crawler crane type HS 8300 HD, the contractor Zeta S.r.l. found a real powerhouse and a suitable solution for this dredging project. On the one hand, the challenge lies in achieving high levels of turnover and, on the other hand, in

removing not only sediment but also larger stones. For this reason Zeta S.r.l. opted for a hydraulic clamshell grab from the Italian manufacturer Rossi with a filling capacity of 22 m³.

Zeta S.r.l. has installed the HS 8300 HD without crawlers on its new dredger Maria Vittoria Z, on which a total of 3,000 t material can be loaded. Thanks to the large volume of the grab and also the short working cycles of only 45 seconds, the Liebherr duty cycle crawler crane handles 2,000 t of material per hour meaning it requires less than two hours to fully load the Maria Vittoria Z. Close by, the dredged material is being gainfully used for the expansion of the Port of Piombino. The dredger is loaded and unloaded by the HS 8300 HD up to four times each working day between 05:00 and 20:00 hrs.

Pactronic®: Lower Fuel Consumption Despite Higher Performance

The duty cycle crawler crane is equipped with Liebherr's own hydraulic hybrid drive system Pactronic®. Through the storage and subsequent reactivation of surplus energy the turnover can be increased and, at the same time, the fuel consumption can be significantly reduced. In combination with Pactronic® the 725-kW diesel motor achieves a system performance that is comparable to a conventional drive system with 1250 kW. Despite high levels of turnover the duty cycle crawler crane has up to 50 % lower diesel consumption (60 l/h) in comparison to similar models. A further important advantage of the Pactronic® system is its reduced noise emission, which is of significant importance for machines operating in residential areas.

Both the machine operator as well as Mauro Boscolo, CEO of the contractor Zeta S.r.l., are delighted with the environmental and economic advantages, "Double the turnover but with 60 l/h only half the diesel consumption." The work in the Port of Piombino clearly confirms that the HS 8300 HD is a machine for heavy duty material handling.

Film

The film shows spectacular images of the HS 8300 HD carrying out dredging work in Piombino: <https://youtu.be/e57rm5AoQjI>

Captions

liebherr-HS 8300 HD-dredging-piombino-1.jpg

The HS 8300 HD dredging in the Port of Piombino.

liebherr-HS-8300-dredging-piombino-2.jpg

It takes less than 2 hours for the HS 8300 HD to load the vessel Maria Vittoria Z.

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