

CASE STUDY

KONECRANES®

Konecranes upgrades ropes on one of the largest cranes in Germany



Just like any other crane part, ropes also need to be maintained and eventually upgraded.



In July 2023, GERMAN NAVAL YARDS in the north of Germany had the 600-ton hoisting ropes on their shipbuilding gantry crane – one of the biggest cranes in the country – upgraded by Konecranes Port Services. Because this upgrade replaces an older rope, the safety and reliability of the crane has been preserved for the future.

GERMAN NAVAL YARDS is specialized in the building, repair, and maintenance of large and technically complex naval defense ships such as corvettes, frigates, and offshore patrol vessels (OPVs) for customers all over the world. Their Goliath gantry crane helps move assembly blocks to different work areas at every stage of the shipbuilding process. It also assembles sections into a finished ship in the mega dry dock. Wear and tear due to regular use require periodic replacement of the rope and comprehensive hoist maintenance, and they decided that a Konecranes rope upgrade would best suit their needs.

The Goliath crane has two 450-ton hoists for a maximum capacity of 900 tons, and a 600-ton hoist for lighter loads. Konecranes changed the two steel ropes, each with a diameter of 42mm and a length of 1,600m, on the 600-ton hoist. Konecranes also changed the rope pulleys in the upper and lower rope blocks of the hoist, and at the same

time, serviced the upper and lower rope sheave blocks of the hoist and the overload device in the upper rope block.

The performance of a crane depends on its rope

Crane equipment usually lasts for decades. But even the best quality steel rope will eventually wear out as it is subjected to high levels of stress on every lift. Routine and systematic rope replacement is therefore essential to ensure maximum safety, maintain performance, and ultimately, extend the lifetime of the crane.

“Spanning 157 meters, our Goliath crane is big enough to reach all the relevant halls and docks in our shipyard and is vital to our continuous workflow. So, it was difficult for us to find a time window to replace the ropes and the right supplier with the tools and expertise for this very specialized equipment,” says Gregor Urbanski, Manager Infrastructure,

German Naval Yards Kiel. “Our Goliath is not a Konecranes machine, so they worked with us beforehand to develop the safest and most efficient rope change methodology with minimal downtime. We’re very satisfied with the results.”

The first hoist is the main challenge

All the hoists on the crane will need new ropes eventually, but to change the ropes on all three at once would cause a lot of downtime. It’s not safe or efficient to change the ropes on only one of the two 450-ton hoists that work in tandem. Therefore, Konecranes opted to make the change on the 600-ton hoist first to ensure the methodology was right. With the success of this rope upgrade, the Kiel shipyard has plans to upgrade the ropes on the other two hoists within the next two years, and Konecranes is at the top of the list of likely providers.

“By replacing their crane ropes regularly, the Kiel shipyard demonstrates a long-term commitment to safety, reliability and performance,” says Dittmar Klotz, Site Manager, Konecranes Port Services. “Although we’d replaced the ropes on other cranes at the Kiel shipyard, this was the first time we’d worked on their Goliath crane. The

technical requirements of the project underline Konecranes’ expertise, innovative solutions, and long experience in the maintenance of shipbuilding equipment, regardless of make, model or type of crane.”






German Naval Yards Kiel GmbH

Werftstraße 110
24143 Kiel
Germany

germannaval.com

Konecranes is a global leader in material handling solutions, serving a broad range of customers across multiple industries. We consistently set the industry benchmark, from everyday improvements to the breakthroughs at moments that matter most, because we know we can always find a safer, more productive and sustainable way. That's why, with around 16,600 professionals in over 50 countries, Konecranes is trusted every day to lift, handle and move what the world needs. In 2022, Group sales totaled EUR 3.4 billion. Konecranes shares are listed on the Nasdaq Helsinki (symbol: KCR).

© 2023 Konecranes. All rights reserved. 'Konecranes' and the  logo are either registered trademarks or trademarks of Konecranes.

This publication is for general informational purposes only. Konecranes reserves the right at any time, without notice, to alter or discontinue the products and/or specifications referenced herein. This publication creates no warranty on the part of Konecranes, express or implied, including but not limited to any implied warranty or merchantability or fitness for a particular purpose.

konecranes.com