
Full E-RTG: New system solution from Conductix-Wampfler

Diesel fuel no longer necessary / New battery technology permits electrical energy supply for RTGs even when changing blocks and alleys / First use in the Port of Tanjung Pelepas, Malaysia

June 2015. Conductix-Wampfler, the world's leading supplier of energy and data transmission to mobile consumers, is now offering port operators and crane manufacturers the new Full E-RTG system, which enables the fully electric operation of rubber-tired gantry cranes (RTGs) – an E-RTG 2.0, as it were. Using new lithium-ion battery technology and optimized charging technology Conductix-Wampfler ensures that the diesel generator and tank will no longer be needed in future. The new Full E-RTG system solution is already in operational use at the Port of Tanjung Pelepas. With Full E-RTG, cranes can now travel up to 1,500 meters (1,640 Yards) on power from the energy-storage system. Previously, the port cranes were only up to 90 percent electrically driven after switching from diesel to electric mode. For the remaining ten percent, they still needed the diesel generator and diesel fuel when changing block or alley and for trips to the maintenance area.

A successful, international development project

"Working together with a renowned research institute we have found the optimum charging technology after various tests with different batteries and supercapacitor systems as part of an international development project," explains Michael Eckle, Director of Global Marketing and Innovation at Conductix-Wampfler. We were able to harmonize the latest automotive battery technology with the special requirements of stacking cranes in ports. "With Full E-RTG, we can now for the first time offer our customers a system solution for the complete electrification of RTGs," said Eckle. Conductix-Wampfler's goal is a further optimization, including by absorbing 100 percent of the energy released when lowering the container in the energy-storage system instead of converting it into heat in large braking resistors as in the past. "There is still more potential for energy efficiency that we would like to

successively exploit for our customers,” is how Eckle describes the challenge for the future.

Tanjung Pelepas as a Pilot Port

The Port of Tanjung Pelepas is the pilot for the use of the new Full E-RTG system solution. The container port at the southern tip of Malaysia, one of the 20 largest in the world, is also one of the first to have converted to E-RTGs as part of the framework contract signed in 2011 between Conductix-Wampfler and APM Terminals to convert diesel-powered RTGs.

A partner for the crane industry

With Full E-RTG, Conductix-Wampfler underlines its role as a major partner of the container-crane industry. The company has long since made a name for itself in the electrification of RTGs, which has been going on worldwide for years. Most recently, Conductix-Wampfler developed the new High Dynamics SMART Drive motor driven cable reel generation for highly dynamic crane applications and ProfiDAT®, a compact solution for data transmission on STS and RTG container cranes. The LASSTEC twistlock container weighing system rounds off the range of new Conductix-Wampfler solutions for the crane industry. It reliably measures the weight of the container on the spreader during the lifting process and meets the requirements of the new IMO (International Maritime Organization) directive, which requires the verified weights of containers before loading them onto a ship from July 2016.

Photos:



Caption: The Full E-RTG system solution with state-of-the-art charging technology developed by Conductix-Wampfler means that E-RTGs will in future no longer need a diesel engine, even for moving between blocks and alleys or for trips to the maintenance area.



Caption: The electrification of rubber-tired gantry cranes (RTGs) is an environmentally-friendly approach that could already save millions of Euros and tons of CO₂ around the world.

Press Release



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