

World-first Konecranes Automated RTG (ARTG) system takes Indonesian container terminal Pelindo III into the future





Konecranes TRUCONNECT® remote monitoring technology provides usage data that optimizes service activities and visualizes maintenance and application compliance. Data can be accessed by mobile devices such as smart phones and tablets.

An innovative container handling terminal in Indonesia has extended the world's first commercially operated fleet of Konecranes Automated Rubber Tired Gantry (ARTG) cranes with nine new ARTGs, as it boosts the safety and efficiency of its steadily expanding operations.

Terminal Petikemas Semarang (TPKS) in Semarang, Central Java, is the second-largest container terminal in the Pelindo III Group, and approximately 70% of its container traffic consists of international cargo. Pelindo III is an Indonesian State-Owned Enterprise (SOE) that manages 43 ports throughout 7 provinces in Indonesia in order to ensure a smooth flow of goods throughout the archipelago.

"TPKS is constantly striving to improve our facilities to meet customer needs and boost our competitiveness. Konecranes is constantly innovating its products to meet container terminal needs, and by choosing them to provide new ARTG cranes, we have taken our operations to the next level of safety and efficiency," says Mr Recky Julius Uruilal, General Manager, TPKS.

"The new ARTG cranes minimize the risk of workplace accidents, which not only improves our workplace, but gives our customers greater confidence in us," says Mr Recky. A fleet of 20 new ARTG cranes is now fully operational at TPKS – the first ARTG installation in the world to be operated on such a wide commercial scale. The ARTG cranes utilize a next-generation automation platform, including fully automated stacking in the yard, Remote Operating Stations (ROSs) for truck handling and the related container yard infrastructure.

"As Pelindo III updates to the latest and most modern equipment in line with the needs of its customers, we know there will be lots of new knowledge to acquire. Konecranes' neat and detailed documentation, plus their experienced and helpful staff, have been very helpful in this process," says Mr Recky.

Konecranes Port Service APAC Regional Director, Mr Jukka Tukia, is delighted to see Pelindo III's readiness to power their business process with the latest technology. "The latest Konecranes technology installed at Pelindo III provides efficiency improvements in many areas, including operational efficiency, efficiency in utilising manpower, and efficiency in maintenance and support functions through modern tools such as TRUCONNECT® remote monitoring," he said.

The new cranes complement an existing fleet of 11 Konecranes ARTGs that have been operating successfully at Pelindo III for more than two years. Mr Tukia adds that although the new ARTGs will have the latest technology and additional features, the existing ARTGs installed at Pelindo III are still highly advanced, and the port is well ahead of industry benchmarks for automated technology.

Advanced service

In addition to providing TPKS with the most advanced products, Konecranes is also supporting the fast-paced

terminal with the most advanced maintenance, monitoring and service technology, including its TRUCONNECT® realtime monitoring service.

Konecranes TRUCONNECT® technology monitors equipment in real-time to provide an accurate report on equipment condition, so that predictive maintenance can be optimized to suit each piece of equipment and how it is used.

"Konecranes' customer focus is on entire service solutions. Once cranes are delivered to customers like Pelindo III and TPKS, we can take complete responsibility for the service and maintenance of the equipment, to optimize its performance and safety over its entire lifecycle," says Mr Tukia.

As the world's leading crane service organization, with more than 600,000 pieces of lifting equipment under service contract worldwide, Konecranes is ideally placed to provide the latest and most advanced service to any organization using cranes or lifting equipment.

"The service and maintenance technologies Konecranes provide us with are world-class. They help us maintain the highest levels of safety, and they can also plan our maintenance schedules more effectively so that we have minimal downtime," says Mr Recky.

Automated RTG innovation

Konecranes was the first company in the world to introduce the Automated RTG crane system on a wide commercial scale, and is currently introducing its latest version (2.0), which incorporates cutting-edge technology and new features.

"ARTG version 2.0 technology can now be retrofitted into any brownfield container terminal. It can fit any container stack envelope because it uses space very effectively. Additionally, truck handling is automated, with remote supervision. One remote supervisor can handle up to five ARTGs simultaneously," says Mr Tukia.


ARTG version 2.0 cranes are equipped with the latest wireless communication technology, including control signals and video signals that are now wireless. This means that the ARTGs can be diesel-powered and there is no need for cable reels and fiber optics.

"The Konecranes ARTG system version 2.0 will be instrumental in driving the evolution of RTG-based container terminals to fully automated operation in the future," says Mr Tukia.

Konecranes' new ARTG version 2.0 cranes enhance safety and uptime.



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 2023, Group sales totalled EUR 4.0 billion. Konecranes shares are listed on Nasdaq Helsinki (symbol: KCR).

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