

# CASE STUDY

# KONECRANES

Non-Konecranes  
RTGs retrofitted  
with Auto-Steering  
by Konecranes  
in Estonia

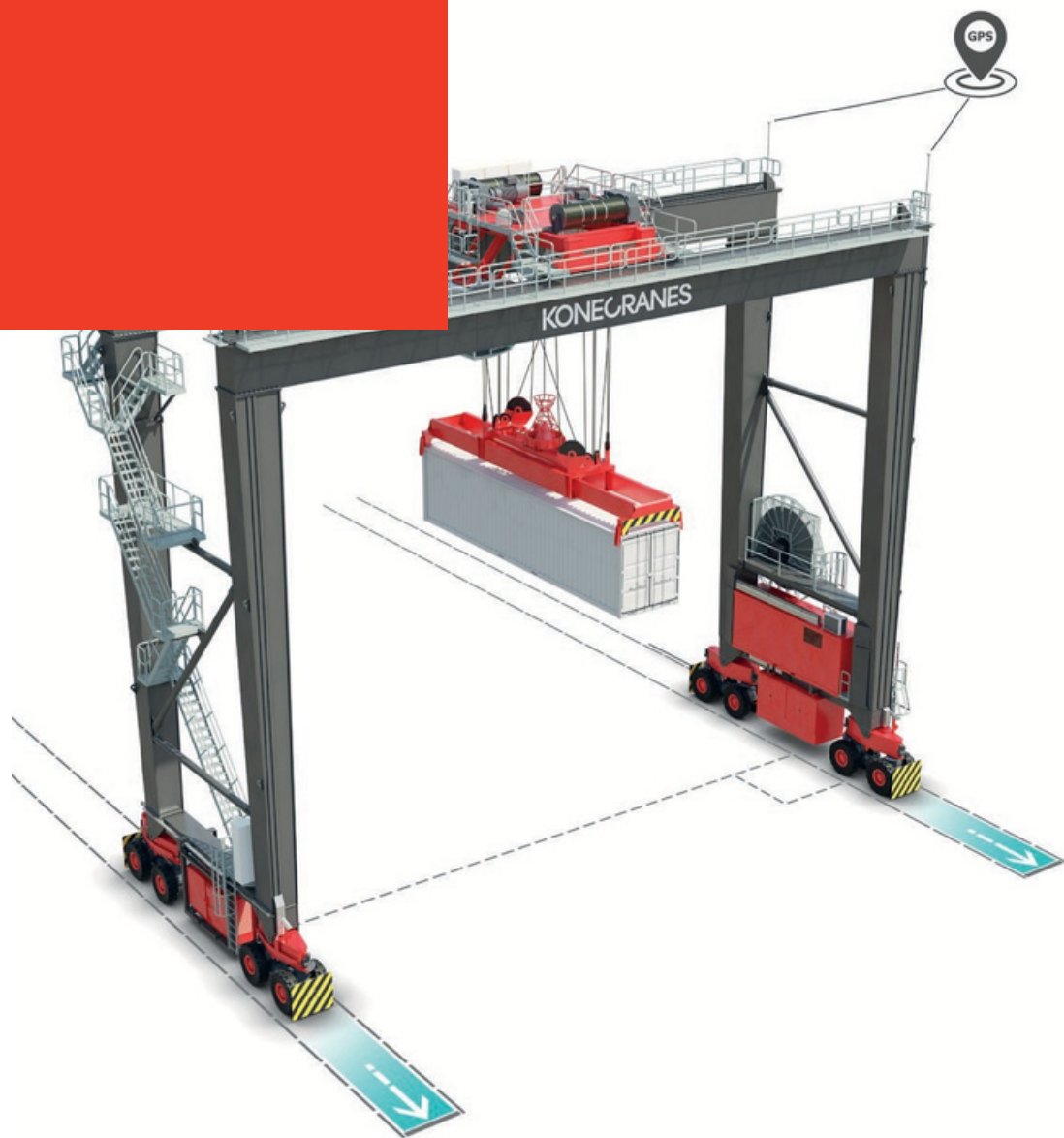




Photo courtesy of HHLA-TK Estonia

**At their terminal in Muuga Harbor, a seaport on the Baltic Sea serving Tallinn, the capital of Estonia, HHLA-TK Estonia have had four RTGs retrofitted with the Auto-Steering retrofit. These cranes can now steer into position automatically while the operator focuses on lifting, improving productivity and safety in yard operations.**

HHLA Group is a leading European port and transport logistics company. Subsidiary HHLA-TK Estonia is the only container terminal in Estonia. an annual throughput of 250,000 TEU and intermodal connections for distribution across the country and nearby territories. To maintain this volume, the facility operates a substantial fleet of harbor equipment, including 2 Rubber-Tired Gantries (RTGs), 1 Rail-Mounted Gantry (RMG), 3 Ship-to-Shore cranes (STSS) and several reach stackers, all from Konecranes. They wanted to upgrade their 4 non-Konecranes RTGs and decided that the Auto-Steering retrofit was right for their needs.

Each of the 4 RTGs cranes was fitted with two GPS antennas to communicate by radio with the GPS base station in the terminal to guide it along predefined drive tracks, or "virtual rails" in the container yard. While the operator controls the speed and direction of the gantry, Auto-Steering eliminates

the need for corrective crane movements by keeping it straight. It also performs gantry slowdown at the end of each container block.

### **An easy way to boost performance and safety**

The goal with every retrofit is to make the handling, functionality and reliability of existing cranes equivalent to the latest generation of Konecranes equipment. Even on equipment that was not originally manufactured by Konecranes, a retrofit adds technology to improve operational efficiency and is a cost-effective way to bring its performance up to the same level as current Konecranes models.

"We've been very impressed with the effectiveness of the Auto-Steering feature on our Konecranes RTGs, so when

we saw how the retrofits helped operations at other HHLA terminals, that got us interested in installing them in our other RTGs as well," says Tõnis Segerkrantz, Technics and Infrastructure Manager, HHLA-TK Estonia. "With the region so reliant on our terminal at one of the few ice-free ports in northern Europe, we can maximize our uptime and efficiency all year round, regardless of ground or weather conditions."

The RTGs at the terminal play an essential role as they manage the container stacks and load and unload trucks for road connections. The two GPS antennas combined with a differential correction from the base station means that the system is able to calculate the crane's position and orientation in all situations with a very high level of accuracy, even if the yard is covered in snow during the winter. Auto-Steering reduces operator fatigue, because they no longer have to split their attention between the movement of the RTG and handling the container on the gantry. When crane operators are less tired, safety is greatly increased and more accurate movements naturally increase productivity.

### **Lasting change requires commitment**

"The success of these retrofits underlines Konecranes' expert knowledge and long experience in the productivity and safety of ports equipment," says Tommi Leino, Product Manager, Konecranes Port Services. "When their key yard cranes have the technology installed to work with their operators to help improve efficiency, HHLA-TK Estonia demonstrates their long-term commitment to their employees, their business partners and the customers who

use their facilities. Konecranes is honored to help them in working towards this goal."

These retrofits are part of Konecranes' **path to port automation**, where container terminals improve productivity and safety in manageable steps. From smart features up to full automation, the path can include supervised operation and remote operation to smoothly introduce the power of automation. The path to port automation applies to all container handling equipment brands. Full automation can be the final goal but it doesn't have to be. Flexibility is the key.






**Konecranes is a world-leading group of Lifting Businesses™, serving a broad range of customers, including manufacturing and process industries, shipyards, ports and terminals. Konecranes provides productivity enhancing lifting solutions as well as services for lifting equipment of all makes. In 2021, Group sales totaled EUR 3.2 billion. The Group has around 16,600 employees in 50 countries. Konecranes shares are listed on the Nasdaq Helsinki (symbol: KCR).**



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