

Konecranes boosts sustainability, safety and efficiency for MSC terminal VLC with Spain's first RTG busbar retrofit



Konecranes RTGs at MSC Terminal VLC have been retrofitted with a busbar system that's providing environmental, safety and efficiency benefits.



Photo courtesy of HHLA-TK Estonia

The Port of Valencia on Spain's east coast has implemented the country's first busbar retrofit of its reliable Konecranes Rubber Tyre Gantry (RTG) cranes to enhance their sustainability, safety and efficiency as they handle more than 4.2 million TEUs (Twenty Foot Equivalent Units) annually.

MSC Terminal VLC (MSCTV) is a major terminal within the Port of Valencia, which is Spain's largest port and the fifth busiest container port in Europe. MSCTV converted its existing Konecranes RTGs to fully electric operation with a busbar retrofit, in addition to purchasing new Konecranes RTGs that came fully busbar-ready.

With a busbar system, the power is supplied by a low electrified fence that provides the physical contact. RTG operation is quiet and there are no diesel emissions. It also eliminates the need for refuelling, so RTGs can spend more time shifting containers.

"The busbar retrofit provides us with a CO2 emissions reduction of approximately 20%, as well as producing less noise, requiring less maintenance and operating at higher levels of productivity and reliability," says Mr Sven Valentin, Terminal Manager, MSCTV.

"MSCTV has a strong company focus on sustainability, and we believe that using 'clean' equipment to reduce our environmental impact is imperative to continuing to work harmoniously with our local communities. Konecranes not only supplies the technology to make this happen, but they share the same environmentally conscious mindset, which makes them a valued supplier to work with," he said.

Konecranes RTGs tick all the boxes

Konecranes RTGs are designed to be industry benchmarks of safety and reliability for container handling operations. The combination of an intelligent steel structure, Active Load Control (ALC) technology and technology-enabled 'smart cabins' provides market-leading safety and productivity benefits.

"In addition to their outstanding safety and productivity benefits, the 16-wheel Konecranes RTGs are generally preferred by the stevedores and dockworkers due to operator comfort, ease of operation and stability features, and we therefore achieve better results than with other brands," says Mr Valentin.

"The cranes have been working very well in operations, and our operators have provided good feedback on the comfort of the cabin and the value in having such a stable spreader when lifting and moving containers," he said.

Pioneering mindset

Mr Valentin says that MSCTV is constantly striving for innovation through simple and efficient methods, and working with suppliers like Konecranes that share the same pioneering mindset has led to genuine benefits.

"The challenge for us is implementing new methods and procedures – to improve sustainability for example – and instilling them in the minds and mentality of each MSCTV

employee and every dockworker. The simplicity of Konecranes' solutions has been a great help in this area," he said.

"For example, our team thought of a 'single push button' system to simplify the RTG operator's requirements and make the busbar retrofit easier to introduce and accept. Konecranes turned our idea into a reality and implemented it seamlessly."

Service partnership

MSCTV has a service agreement in place with Konecranes, to ensure that all cranes are maintained and serviced regularly and kept Standards compliant.

In addition to regular maintenance, Konecranes also provides MSCTV with dedicated service technicians on a daily basis, who work closely with the terminal's maintenance department.

"Having dedicated service technicians that are familiar with our operations and can work harmoniously with our engineers is a major benefit. It's helpful for providing us with a quick diagnosis from an expert and proceeding with the best solution. Importantly for us, this shows our dockworkers that we will efficiently and proactively address any issues, and this reflects very positively on the company," says Mr Valentin.

As the world's largest crane service organisation, with more than 600,000 pieces of lifting equipment under service worldwide, Konecranes is uniquely equipped to provide proactive advice and suggest improvements that can benefit a company's operations.

"MSCTV strives for transparency across its operations, including company changes, working methods and new technology, but we need help from our suppliers. While we focus on our operations and ensuring our workers are taken care of, we expect companies like Konecranes to actively invite us to improve our equipment. Konecranes has truly gone above and beyond in this regard," says Mr Valentin.

Additional safety retrofits


In addition to the major busbar retrofit, MSCTV requested that Konecranes also add further features to the RTGs to enhance their safety and performance, by adding the latest technology, including:

- Trailer lift prevention, which automatically stops hoisting if it detects that a trailer is being lifted up with the container.
- Auto-steering, which creates virtual rails for the RTGs to follow. This helps the operators guide the RTG to avoid hazards. It improves safety in all weather conditions and provides greater driving accuracy, even on uneven yard surfaces.

Konecranes' dedicated team is consistently listening to feedback from MSCTV about areas where they want to enhance operations and safety. Retrofits are often a cost-effective way to incorporate the latest safety and efficiency features into a crane that is still performing well and has not reached the end of its design life yet.



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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