

CASE STUDY

KONECRANES

Konecranes retrofits first four-rope drive for floating mobile harbor crane on the Mississippi River





Photo Courtesy of ADM

In March 2022, at a mid-stream berth on the lower Mississippi River, American River Transportation Co., LLC. (ARTCO) had one of their floating Konecranes Gottwald Mobile Harbor Cranes updated with the first four-rope drive retrofit ever installed. Because this retrofit replaces a DC drive that is no longer available, the life of the crane will be extended by continuing spare parts availability.

Archer Daniels Midland Company (ADM) is one of the largest food companies in the world. Its wholly owned subsidiary ARTCO operates five mid-stream berths on the Mississippi River, with a complete range of stevedoring services, including bulk transshipment between large ocean-going vessels and smaller barges used to transport bulk cargo on inland waterways. To maintain an average monthly throughput of one million tons, they have a fleet of 7 barge-mounted four-rope grab mobile harbor cranes, comprising 3 Konecranes Gottwald G HPK 6400 Bs, and 4 of the larger G HPK 8400 Bs delivered from 2008-2019. With the demands of operating 24/7, the cranes need frequent maintenance, but the first of these cranes arrived more than a decade ago, and the original electrical components are becoming harder to obtain.

All seven of the cranes are still working well, but to ensure long-term reliability, the first Model 8 variant G HPK 8400 on-site has now had a drive retrofit. This replaced the DC drives for hoisting and slewing as well as for the variable braking resistor, plus one additional control unit for the four-rope configuration. A new onboard computer (IPC) was also installed, with VISUMATIC 8 software, along with a new monitor, keyboard, mouse and UPS for the electrical control room, and readiness to link the crane to Konecranes TRUCONNECT® Digital Services.

An easy way to lengthen the life of a crane

Konecranes equipment is built to last for decades. But even the highest-quality components will eventually wear

out, while the steel structure of the crane is often still in good working condition. So, a drive retrofit is meant to replace obsolete parts from the drive's original equipment manufacturer (OEM) to ensure that parts are always available in the future and downtime is minimized.

"Properly functioning equipment is vital to ensure a steady, continuous service for our customers. Even though it was the first time Konecranes had done this retrofit, we have complete trust in their expertise," says Katie Dunn, Assistant Stevedore Manager at ARTCO. "The crane is just as good as it was before the retrofit – in fact, our drivers haven't noticed any difference in performance. But now we're confident that parts will be available for the next 10-15 years."

The first ever four-rope drive retrofit

This retrofit is just the first crane to be upgraded in a long-term retrofit project. ARTCO plans to retrofit all of

its Konecranes Gottwald Mobile Harbor Cranes as they age. Because the cranes play an essential role on their mid-stream floating barges, they cannot allow any non-essential downtime. In addition, the new software installed on the crane has allowed on-site Konecranes technical support to be more efficient in maintenance tasks, and the TRUCONNECT® option offers the potential for additional technical analysis and remote monitoring.

"When their floating barge cranes are updated to ensure continued service, ARTCO demonstrates a long-term commitment to their customers, and we're excited to help them work towards this goal," says Jason Dupont, Regional Sales Manager, Konecranes Port Services. "This retrofit is also a first for Konecranes: it's the first four-rope retrofit we've ever done and is the model on which all similar retrofits will be based. To be a part of so many firsts underlines Konecranes' expert knowledge, innovative mindset and long experience in the maintenance of ports equipment."




The first-time retrofit on one of the ARTCO floating cranes in the lower Mississippi simplifies maintenance with improved parts availability.
Photo Courtesy of ADM



American River Transportation Co., LLC.
Archer Daniels Midland Company
8400 River Road
Waggaman, LA 70094
United States

<https://www.adm.com/>

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