Konecranes Assists Ludington Pumped Storage Plant

Konecranes

Konecranes [1] has been selected to supply two 410-ton gantry cranes integral to an $800 million USD maintenance and upgrade project at the Ludington Pumped Storage Plant in Ludington, Mich. The Ludington Pumped Storage Plant is owned by Consumers Energy Company and the Detroit Edison Company.

The cranes are needed to handle the larger turbines that will be installed at the plant as part of a 10-year project. The new turbines are too heavy for the facility's original 360-ton crane to handle. Working together, Konecranes two 410-ton gantry cranes will be able to lift an entire generator stator, which weighs about 810 tons. The enhanced lifting capability is expected to save substantial time during construction.

The maintenance and efficiency upgrade will increase the generating capacity of the Ludington Pumped Storage Plant from its current 1,872 megawatts to approximately 2,172 megawatts. The plant currently produces enough to power a community of 1.4 million people. The upgrade will enable the facility to meet the electric demand of a community of 1.65 million, while the increased water pumping efficiency will further decrease the plant's operating costs.

"These are very large, process-specific cranes, and they must work reliably for many years to come," said Konecranes Vice President of Cranes and Components JuergenGieske.

The cranes each have three trolleys, with main "hook to hook" dimension when making a dual lift of 47 feet. The main hoist of each crane is rated CMAA class "C", with auxiliary hoists rated class "D." Controlled by an operator's cab, the cranes can make fully synchronized tandem lifts, with either crane operating as the "master."

The cranes themselves have a number of special features, including micro speed, which is the ability to rescale the drive output to accurately position critical loads at extremely slow, controlled rates of speed, and hoist speed synchronization. The cranes also include shock load prevention and Konecranes signature DynAPilot anti-sway technology.

Because the cranes will operate outdoors on a bluff above Lake Michigan, Konecranes built in a number of special features designed to cope with weather conditions. Automatic storm brakes, special paint, heaters, and stainless steel enclosures or "doghouses" over the hoist machinery to prevent falling ice are designed to improve performance and safety while operating in wind speeds up to 35 mph (90 mph parked) and sustained temperatures in the single-digit range.

The cranes will be built at Konecranes' manufacturing facility in Franklin, OH. Delivery and installation is scheduled to take place this summer. Konecranes will provide operator and maintenance training as part of the contract.

Konecranes is a 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 and machine tools of all makes.

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