

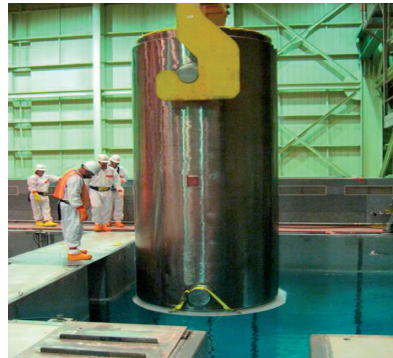
## R.E. Ginna Nuclear Power Plant, Ontario, N.Y. SPECIALIZED CRANE ENHANCES SAFETY THROUGH ADVANCED ENGINEERING

### CHALLENGE

#### High-capacity crane needed to handle spent fuel

When R.E. Ginna Nuclear Power Plant needed a specialized high capacity crane to be able to off-load spent fuel from their fuel pool to dry cask storage, they trusted the expertise of Konecranes.

“We needed to find a partner that could provide us with a significant capacity crane and crane configuration dedicated design. One of the challenges was the fleet cask size – a 125 ton cask – that dictated crane configuration,” says Mark Fitzsimmons, Principal Engineer, Nuclear Engineering Services, from Constellation Energy Nuclear Group.



### SOLUTION

#### Crane developed to meet space, capacity, safety and regulatory requirements

After a competitive bid process, Konecranes was selected as a turnkey supplier of a complex single failure proof crane.

During the process of assessing the project, a new challenge was determined: the building structure surrounding the fuel pool was not originally designed to support the weight of a fully loaded 125 ton single failure proof crane that was required to move and load the spent fuel for dry cask storage. Konecranes and Ginna worked closely together during the entire project to make sure the solution would meet the demanding requirements.

Handling spent nuclear fuel is a highly specialized task and requires compliance with strict and comprehensive regulatory requirements of the U.S. Nuclear Regulatory Commission. Konecranes knew that it had the technical knowledge to solve the problem, along with the ability to comply with the stringent requirements of NUREG-0554 and ASME NOG-1 single failure proof crane design criteria.

This was accomplished by designing a hybrid single failure proof crane that was actually installed outside of the crane operating area, but that is able to access the crane operating area by telescoping into the building. This is no small feat considering the crane is rated at 125 tons, is single failure proof and that it reaches into the building to pick up spent nuclear fuel.

### RESULTS

#### Konecranes continues to provide crane service and support

“The crane was installed and delivered on time, but there were some original materials that weren’t as compatible as we would have liked. But Konecranes supported us through the problems, and we ran our first campaign without a hitch.”

Konecranes is now under contract to provide maintenance service for the crane, thereby ensuring that it is properly cared for during its lifetime and that it will perform the key tasks that are necessary to load and handle spent nuclear fuel.

According to Mark, business is growing and they will need high performing cranes as well as support for older cranes on a fleet wide scale. This could lead to opportunities for more successful joint projects in the future.

“Konecranes came up with a new solution based on our current situation. It was an innovated idea, and they presented a model that showed the outcome.”

*Mark Fitzsimmons, Manager of Plant Operations, Principal Engineer*





**INDUSTRIAL CRANES:** Konecranes is the industry benchmark for safety, reliability, cost saving and productivity-enhancing innovation. Standard and heavy duty cranes include electric overhead cranes up to 1,000+ tons and explosion-proof cranes and components. Workstation lifting systems feature enhanced material flow with ceiling-mounted monorails and free standing cranes systems, jib cranes and manual lifting products and electric chain hoist up to 7500 kg. Konecranes provides any lifting application in any industry.



**NUCLEAR CRANES:** With nearly a half century of nuclear crane experience Konecranes is the most seasoned supplier in the industry. Our wide range of products are designed specifically for operation in nuclear applications and our quality control program ensures that each nuclear crane and component is designed, manufactured and installed to the demanding standards of the nuclear industry.



**PORT AND PORTAL CRANES & SERVICE:** Konecranes designs, manufactures, and delivers large cranes for ports, container terminals, intermodal terminals, shipyards and bulk material handling. We also provide expert maintenance and after-sale support as well as complete crane service worldwide for all types and makes of harbor and shipyard cranes.



**HEAVY-DUTY LIFT TRUCKS:** Konecranes is a world-leading manufacturer of lift trucks with lifting capacities of 10 to 80 tons. For over 50 years Konecranes has designed and customized trucks for the most demanding applications and continues to offer a wide range of trucks for customers in many different industries. Products include fork lifts, reach stackers, container handlers, and Roll-on Roll-off (RoRo) Trucks.



**CRANE SERVICE:** Konecranes provides an extensive range of services and unique capabilities dedicated to improving safety and helping your business decrease the cost of downtime and increase the productivity of uptime. We can service any brand of crane and hoist. As a leading global manufacturer with a 120-year history and the leading maintenance provider in the Americas and around the globe, Konecranes technicians understand what it takes to keep your equipment working at top performance.



**MACHINE TOOL SERVICE:** As a global leader in machine tool maintenance service, Konecranes offers world-class service on all makes and models of machine tool equipment. From maintenance programs to rebuild, remanufacture and retrofit, we have the knowledge and expertise required to keep your equipment running effectively and efficiently.



**PARTS:** Konecranes is the OEM for many of the best known brands of hoists and cranes as well as the largest single source supplier for parts of all makes. We have the most extensive inventory in the industry, as well as dedicated in-house parts manufacturing and extensive reverse engineering services to assist you with obsolete and/or not readily available parts. Our expert technicians are always available to help with field installation and support.



**TRAINING:** One of the easiest and most cost effective ways to improve safety and productivity while reducing maintenance costs is crane operator training. We can provide on-site training that is tailored to your needs, budget and schedule. In addition you will improve employee morale, generate good will and may reduce liability. We also offer courses at our Training Institutes in Milwaukee and Los Angeles as well as regional seminars in 40 cities per year.