Megashor Supports 195 Tonne Gantry Crane Removal

Client: VSL Heavy Lifting
Location: Goesgen, Switzerland
Products: Megashor

The huge gantry crane, which was contained within the generator building at the nuclear power plant, had to be safely supported, as it was lowered 20 metres down to ground level and placed onto a transport vehicle. To remove the crane safely, the 26 metre high Megashor towers had to be compatible with VSL’s high level lifting platform and strand jacking equipment, particularly as the process had to be reversed when the new crane was lifted into position.

Challenges

This was a logistically challenging project that required 128 tonnes of standard and specially fabricated equipment, including header beams and Megashor rods, to be moved from RMD Kwikform’s UK headquarters in Aldridge, to the site in Switzerland. Rigorous safety requirements also needed to be met throughout the project.

Commenting on the challenges faced, Rolf Oesch from VSL Heavy Lifting, project manager at the Goesgen said: “This was a demanding project that was made more challenging by its setting at a nuclear power plant. With this in mind, we demanded a solution to provide support to the 195 tonne crane that met a very specific set of criteria. This included pre-design solution modelling and an overall high level of experience from the team. The design also had to be compatible with the heavy lifting solution we devised for the project, involving our strand jacking technology and a high level lifting platform, that would be used to lower and raise the crane.

“RMD Kwikform was quickly identified as the most suitable provider and they delivered a helpful and professional service. They also supplied expertise to work alongside us to maintain the high standards of health and safety required for the project. An on-site demonstrator assisted with pre-assembly and installation of the Megashor towers, in addition checking the erected equipment. Another positive aspect of working with RMD Kwikform and the Megashor equipment was its modular design, as it could be simply assembled in-situ. This was a very important consideration when working with such a vast quantity of material.”
To extract the crane from the generator building, a large slot was inserted in the concrete wall at the end of the building. The Megashor towers were then erected against the gable end wall in specific positions, allowing the VSL equipment to be bolted to them securely. The running rail of the gantry crane could then be extended, allowing the VSL equipment to be bolted to them securely. The running rail of the gantry crane could then be extended, allowing the 195 tonne piece of equipment to be rolled out of the building and onto the tower structure. This required very precise calculations and siting on equipment, as if the crane fell or slipped, it could damage the surrounding structures that are integral to the continued operation of the active nuclear power plant.

**Designing the optimal solution**

Adam Fixter, senior project engineer at RMD Kwikform said: “In total we supplied 900 linear metres of Megashor, 1.1 kilometres of steel Superslim beams and approximately 2.5 kilometres of flat braces to the site in Goesgen. That equated to seven trailer loads of equipment, meaning that planning had to be absolutely precise to ensure the materials arrived in an order that suited the pre-assembly sequence.”

“We put a lot of resources into designing an optimal solution that would work safely and securely on an active nuclear plant, while also being compatible with VSL’s lifting equipment. We also have a lot of experience moving large amounts of equipment of this type all over the world, and knew that the critical element of the project was how to manage the time scales required for construction materials leaving our depot and arriving onsite. Also, it was vital for us to recognise the importance of integration between the two teams and the engineering support required to assist in the erection process. Here RMD Kwikform supplied key staff to the project who supported the core erection teams, providing training and checking procedures.”

**Want to know more about this project?**

**Contact:**

Martyn Henry
Export Sales & Business Development Manager
Email: martyn.henry@rmdkwikform.com