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Gas turbine power plant/ turbine hall crane **OAO FORTUM, NYAGAN, RUSSIA**



The Challenge

OAO Fortum, the Russian subsidiary of the Fortum Corporation, operates in Russia's oil and gas producing region and is a major player in the local energy industry. The company is undergoing a huge investment program, the largest project of which is the new approximately 1.3 Billion EUR greenfield power plant in Nyagan, Khanty-Mansi, Russia. The new power plant will consist of three 418 MW combined cycle gas turbine (CCGT) units which have a total capacity of 1,254 MW. The first unit is planned to be commissioned in 2012.

Fortum has selected the E4 Group, one of the leading Russian engineering companies specializing in power and heat constructions, as a contractor for construction works.



The E4 Group is also responsible for delivery, installation and commissioning of the main systems and equipment including cranes.

The most critical cranes in the project are turbine hall cranes, which are key components during the erection stage of the plant and later used for maintenance purposes. For these cranes, on time delivery and smooth commission and acceptance procedures are absolute requirements in order to keep overall project schedule. The cranes are used for the lifting and accurate positioning of valuable and heavy process equipment like generators (343 tons each).

The Solution

After a careful selection process, the E4 Group decided to purchase three turbine hall cranes from Konecranes (one for each unit) with a 370 ton lifting capacity of main hoist. In addition the cranes have two auxiliary hoists with 25 ton and 2 ton lifting capacities.



There are also two jib cranes in each turbine hall, which are equipped with Konecranes XM hoists. In addition to being able to provide high quality products, Konecranes was able to meet the required delivery time, design cranes according to local standards and provide documentation for applying for acceptance from Rostekhnadzor (Federal Service for Ecological, Technological and Atomic Supervision of the Russian Federation).

The Results

All the cranes were delivered on time and were ready to perform when needed. The cranes have been used for the erection of the plant and they have proved to be reliable and easy to use. They are operated by radio, and not from the cabin as it is traditionally done in Russia.

Crane operator **Irina Muhina** says that controlling the crane by radio was a new experience for her, but she greatly appreciates the better visibility of the load from floor level.

Alexander Kulzhinskih, Fortum's engineer of technical service and repair, emphasizes the high quality of the turbine hall cranes, which in practice means smooth movements, low noise level and reliability, making operating easy and comfortable.

Konecranes has proven to be a global supplier with a strong local presence and knowledge of local standards. Based on his experience gained from this project, Mr. Kulzhinskih would be ready to recommend Konecranes as a crane supplier in the future as well.



OAO Fortum, Nyagan GRES

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