

Liebherr heavy lift offshore crane starts operation in Global Tech I

- Heavy lift offshore crane used for the installation of rotor stars in Global Tech I
- Space saving positioning thanks to special design as “crane around the leg”
- Litronic® control system ensures ease of operation

Nenzing (Austria) April 2014 – In early March Liebherr’s new heavy lift offshore crane CAL 45000-1200 Litronic® successfully started with the installation of AREVA Wind’s rotor stars in the North Sea wind park Global Tech I. The crane which was built at the Liebherr MCCtec Rostock GmbH and assembled at the Crist shipyard in the Polish town of Gdynia is part of the jack-up vessel Vidar belonging to Hochtief Solutions.

The approximately 100 t heavy rotor stars with a 116 m diameter were preassembled and loaded onto the ship at the JadeWeserPort in Wilhelmshaven, Germany, about 170 km away from the construction field. During installation in the wind park they were first lifted horizontally and then rotated to the vertical position by using a special pivoting crossbar. At a height of about 92 m above the water surface the rotor stars were then fixed to the nacelle.

Designed as “crane around the leg”

Being only the second crane to be built as “crane around the leg” (CAL) – after the delivery of a CAL 64000-1500 Litronic® to the vessel Innovation in 2012 – it offers several advantages for the offshore installation. The crane is able to rotate around one of the four jack-up legs of the vessel. Thanks to the special design it can be positioned in a space saving way, despite its enormous size. It thus requires a relatively small obstruction area of only 12 m.

The special twin-boom design means that two booms run parallel to each other at a distance of 14 m, hence allowing the boom to be parked over one of the vessel’s front

legs. This solution prevents the crane from obstructing free space on deck which can then be used for loading the vessel.

The CAL 45000 achieves a maximum lifting capacity of 1,200 t at a maximum working radius of 27.5 m. The boom length is 108 m and the dead weight of the crane is 1,500 t. Another fascinating feature is the lifting height of over 120 m above deck. The slewing ring of the heavy lift crane has an outer diameter of 13 m.

Ease of operation

The combination of slewing bearing, slewing gear, winches and the Litronic® control system, all manufactured by Liebherr, enables exact positioning and safe moving of the loads while reducing fuel consumption. Together with the powerful 4,000 kW electro-hydraulic drive this provides optimum control in all operating conditions. Moreover, in the crane's development stage special attention was paid to ease of maintenance.

Thanks to the CAL 45000-1200 Litronic®, Hochtief Solutions expects to reduce set-up and maintenance times for offshore wind power stations of the newest generation. It will thus contribute to increased productivity.

Range of maritime offshore cranes

With the CAL 45000-1200 Litronic® crane, Liebherr once again meets the increasing demand for high performing heavy lift offshore cranes and underpins its position as world market leader in this segment. Liebherr's current heavy lift offshore crane series consists of machine types with lifting capacities from 300 t to 2,000 t.

Global Tech I wind park

Being one of the first wind farms in the German North Sea, Global Tech I will consist of 80 AREVA M5000-116 wind turbines with a capacity of 5 megawatts each. It will occupy an area of roughly 41 km². After its completion it will deliver electricity for an

equivalent of 445,000 households with an average consumption of 3,130 kilowatt hours annually.

Caption

liebherr-CAL45000-heavy-lift-offshore-crane.jpg

Operation of heavy lift offshore crane CAL 45000 in windpark Global Tech I.

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