

EN

HLC 295000

Job report – Installation of
XXL monopiles

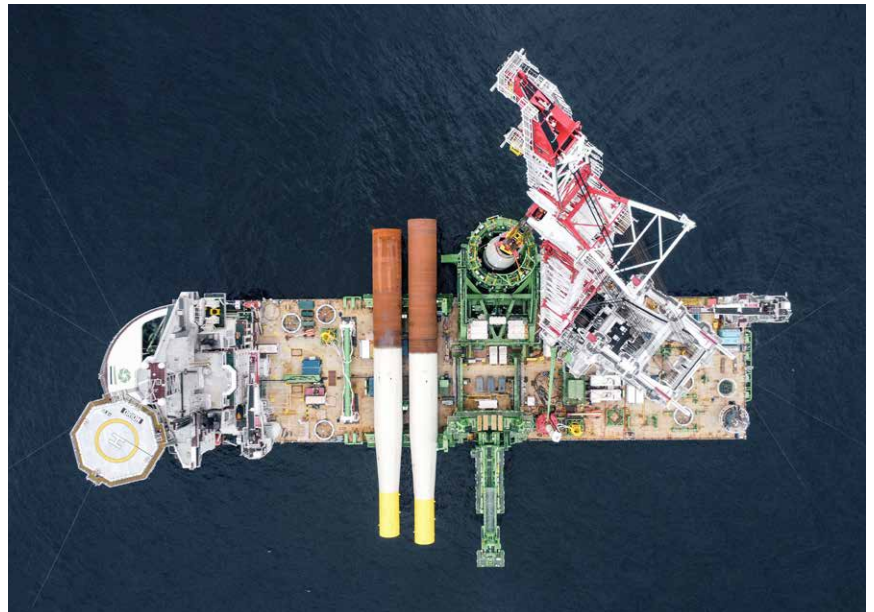
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LIEBHERR

Offshore cranes



Installation of XXL monopiles



Situation

20 kilometres northeast of the coast of Rügen, the “Arcadis Ost 1” wind farm was built. This 257-megawatt offshore wind park will produce electricity for up to 290,000 households. The offshore wind farm features turbines with a hub height of 110 metres, a rotor diameter of 174 metres and a single rated capacity of 9.5 megawatts.

Task

For the construction of the wind farm and prior to the installation of the wind turbines, 28 XXL monopiles needed to be driven into the seabed. The foundations, which weighted over 2,000 tonnes and were up to 110 metres long, thus representing the heaviest and longest foundations in the entire European offshore wind industry to date.

Solution

The ORION, the most advanced vessel for the floating installation of foundations on a commercial scale, comes up with some very sophisticated features and allows optimised processes with its potent heavy-duty Liebherr crane. Using the vessel’s “DP3 floating installation method”, the HLC 295000 positioned, handled and upended the monopiles directly from the ORION in record time. Thanks to the advanced process and beneficial seabed conditions only 0.9 days were needed per monopile foundation, including the loading process.

The HLC is an exceptional combination of efficiency, speed and operational readiness. The heavy-duty crane proved its reliability repeatedly, often in series of lifting sequences, overall lasting 24 hours or longer. The sensitive controls enable precise manoeuvring, ensuring a safe workflow with tremendous accuracy.

Overview

Year of construction	2022
Vessel location	Northeast of the German island of Rügen
Crane type	HLC 295000
Max. SWL (t)	5,000
Boom length (m)	151
Turbine spec.	Vestas V174-9.5 MW
Monopile weight	up to 2,000 t
Monopile length	up to 110 m

HLC Website

