

DanTysk Offshore Wind Farm

Execution of the DanTysk Offshore Wind Farm in the North Sea



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In the spring of 2011, Aarsleff entered into a contract for the execution of the offshore wind farm DanTysk in the North Sea, approx. 70 kilometres west of the island Sylt. The contract consisted of design, production and installation of 80 monopile foundations installed in water depths of up to 32 metres. The project was carried out by a consortium consisting of Vattenfall and Stadtwerke München. The offshore wind farm will be able to generate a total output of 288 megawatt thus supplying energy to approx. 500,000 homes.

80 foundations of 730 tons

The 80 foundations consist of a monopile and a transition piece. The monopiles are up to 65 metres long and weigh up to 680 tons. Besides the monopile, the foundation consists of a transition piece with a weight of 250 tons and a length of 27 metres. The foundation diameter is up to 6 metres.

Manufactured in the Netherlands and in Belgium

The monopiles and the transition pieces were manufactured by the companies SIF and Smulders at factories in the Netherlands and Belgium. The manufactured monopiles were stored in Vlissingen in Belgium where the transition pieces were also supplied in sets of four.

From Vlissingen, the monopiles and the transition pieces were transported to Esbjerg on our own pontoons. In Esbjerg, the monopiles and the transition pieces were reloaded onto the installation vessel which then transported the components to the offshore wind farm, situated about 80 km from Esbjerg.

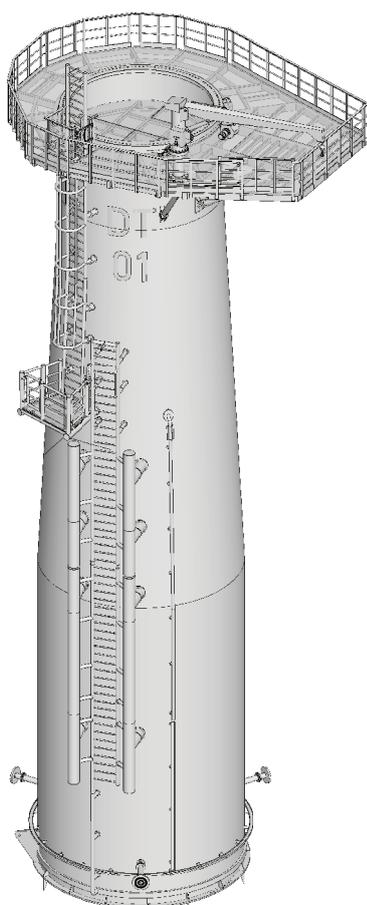
The contract was carried out in cooperation with our German partner Bilfinger Berger GmbH with whom we have cooperated on a number of other projects.

Left: The installation vessel Seafox 5 was constructed at Keppel FELS Shipyard in Singapore.

Right: DanTysk Offshore Wind Farm is built in the North Sea close to the maritime border between Denmark and Germany.



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Left: 3D drawing of transition piece for wind turbine foundation.

Right: The first transition piece is being manufactured. The transition piece consists of steel plates which are rolled and welded together.

Data

- 80 monopiles with a weight of up to 680 tons, a length of up to 65 m, DN6 m, and a wall thickness of up to 126 mm
- 80 transition pieces with a weight of up to 286 tons, a length of up to 27 m, DN5 m at the top at the flange and DN6.3 m at the bottom and with a wall thickness of up to 74 mm.

Client

Consortium: Vattenfall 51% and Stadtwerke München 49%

Type of contract

Turnkey contract

Contractor

Aarsleff Bilfinger Berger JV

Cooperation partner

Bilfinger Berger AG

Construction period

2011-2013

Contact

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