



F+Z BAUGESELLSCHAFT

OFFSHORE BASE CUXHAVEN

Berth 8

Contract Value:

~ € 45 million

Executed by:

F+Z Baugesellschaft

Employer:

Niedersachsen Port GmbH & Co. KG

Construction Period:

2008-2009

Construction site:

Cuxhaven

Specifications / Main Quantities:

| | |
|------------------------------|--------------------------|
| Removal of revetment stones: | 55.300 m ³ |
| Placing of revetment stones: | 55.300 m ³ |
| Sandfill: | 1.000.000 m ³ |
| Concrete works: | 11,000 m ³ |
| Tubular steel piles (1.42m): | 4,800 to |
| Steel sheet piles: | 1,000 to |
| Steel coating: | 20,000 m ² |
| Battered steel anchor piles: | 2,400 to |
| Concrete piles: | 800 m |

Germany plans to increase its share of renewable energy by the installation of offshore wind farms in the North Sea. For this purpose the city of Cuxhaven, located on the estuary of the Elbe River, is the ideal place to serve as on-shore base for the construction and shipment of wind turbines and their foundation elements.

The port authority is currently setting the stage for wind energy companies to settle in the area by providing appropriate port infrastructure. As part of this effort, Berth 8 was constructed as an extension to the existing port facilities of Cuxhaven in direct vicinity to manufacturing plants of the wind energy industry.

Berth 8 has a height of 16 m. It accommodates a 160 m long mooring section parallel to the navigation channel, a 105 m long waiting berth for the transport ships, and a 116 m long loading berth built perpendicular to the navigation channel behind the waiting berth.

The quay wall consists of tubular steel piles with intermediate sheet piles.

The tubular piles are up to 35 m long with a diameter of 1.42 m and a wall thickness of 16 mm. They were driven at intervals of about 3 metres.

Interlocking sections were welded to the piles to form a connection with the up to 20 m long intermediate sheet piles.

The upper meters of the sea-facing side of the quay wall are provided with a protective coating. In addition a cathodic corrosion protection was installed for the entire quay wall.

Once the quay wall was installed, a jackup barge was used to drive the battered steel anchor piles for the wall. They are up to 59 m long and were fixed to the tops of the tubular piles of the quay wall.

A concrete capping beam on top of the quay wall and an up to 20 m wide concrete platform behind it complete the construction. The platform is founded on concrete piles, 61 cm in diameter, with lengths of up to 32 metres.

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