



DEPENBROCK

REFERENZ HARBOUR CONSTRUCTION AND MARINE ENGINEERING

Crane Pier Gryfia – Szczecin, Poland



Bilfinger Mars Offshore, BMO, built a production facility for offshore wind turbine foundations, as jackets and transition pieces on Gryfia island in the Odra river in Szczecin, Poland.

For the loadout of these large and heavy components onto ocean-going pontoons, a giant gantry crane was needed to pick-up the components from the land-based storage area. The crane, which is capable to lift up to 1400 metric tons and to tilt its cargo from horizontal into vertical position runs on crane rails, one at the eastern quay wall side of the basin and one at the western side on a pier.

The harbour basin has a total length of approx. 145m – thus the crane can run right over the waiting ocean-going vessel or pontoon for loading or unloading operations.

The piling works for the new quay walls and the crane pier were carried out by BMOS **now** F+Z Baugesellschaft. The demolition works, dredging-, concrete- and earthworks were done by Porr Poland as main contractor.

The scope of marine piling works comprised the driving and anchoring of a new sheet pile wall with a total length of 248,5m. The new wall was partly back-anchored with 22 horizontal anchors which were fixed in the old quay wall superstructure, while the remaining regions were anchored with 66 pieces HTM 600/136 batter piles at an average inclination of 45°.

The land-sided eastern crane rail beam was founded on precast concrete piles, while the water-sided crane rail stands on 29 supporting tubes with a diameter D = 508x16.

The western crane rail beam (the pier) is supported by 73 tubes D = 1067x16 and secured against horizontal loads with 18 inclined tube piles, each with a length of 45m.

Contract Value:
~ 3,20 € Mio

Executed by:
Bilfinger Marine & Offshore Systems GmbH
today: F+Z Baugesellschaft

Employer:
PORR Poland

Construction period:
04/2015 – 01/2016

Site:
Gryfia Shipyard Island, Odra river - Szczecin/Poland

Specifications / Main quantities:

HTM 600/136:	360 to
Tube piles D 1067x16:	719 to
Tube piles D 508x16:	104 to
Raker tube piles:	161 to
Sheet piles, AZ24-AZ40:	982 to
Horizontal anchors D=73:	11 to

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