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REFERENZ HARBOUR CONSTRUCTION AND MARINE ENGINEERING Reconstruction Berth 9.3 - Cuxhaven



By having issued a variant solution with an optimized foundation system the consortium of Bilfinger Marine & Offshore Systems GmbH and Kurt Fredrich Spezialtiefbau GmbH received the contract for the reconstruction of the Berth 9.3 in Cuxhaven. The execution took place between June 2016 and April 2017.

The building is part of the Offshore Base Cuxhaven in Cuxhaven harbour and was rebuilt for the handling of wind power components and the handling of RoRo-goods.

One special feature of the building is the highly loaded pier slab (approximately 115m x 55m x 1m) founded on in-situ concrete piles. The slab is not covered with any protecting layers, but was designed as a directly trafficked concrete slab and therefore had special requirements for freeze-thaw resistance (XF4), wear resistance (XM2) and surface finish (exposed concrete class SB2).

Contract Value:
~ € 5.708 million

Executed by:
Bilfinger Marine & Offshore Systems
GmbH
(TGF 50%)
today: F+Z Baugesellschaft

Employer:
Niedersachsen Ports GmbH & Co. KG

Construction Period:
June 2016 - April 2017

Construction site:
Cuxhaven

Specifications / Main Quantities:

- 368 pieces situ concrete pile, avg. 0,6x30m
- micropiles GEWI 63.5
- 6.800 m³ of structural concrete in SB 2
- Steel hydraulic structures
- 21.500m³ earthworks
- 4.000m² surface mounting
- underground duct construction

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Because of the variant solution, developed by the technical office and the quotation department of Bilfinger MOS, the slab and its foundation elements were optimized: among other things almost a third of the batter piles and the in-situ concrete piles and about 10% of the plate thickness could be saved. In addition to cost savings thus also yielded benefits in terms of execution risks (building obstacles) and significant time savings in the construction (with concomitant minimization of winter construction and flood risk).

Through an accelerated kick-off of the implementation planning which has been done fully in-house as well as the close coordination with our construction management, the construction started immediately and the duration of the construction time was further improved.

