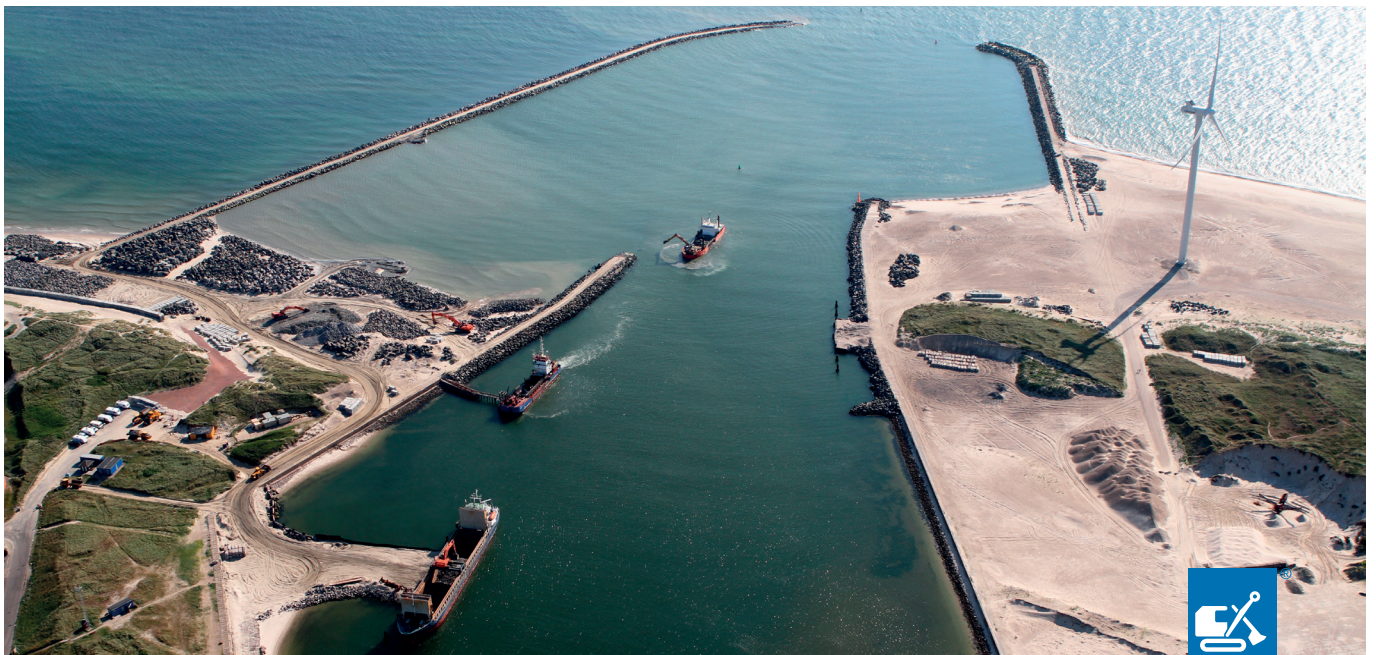


Port of Hvide Sande

New outer breakwaters and new West Port



AARSLEFF

In joint venture with our subsidiary VG Entreprenør A/S, Aarsleff has improved the entrance conditions for the port in Hvide Sande which is one of Denmark's largest fishing ports. The entrance conditions used to be unstable, as the entrance often sanded up during storms. As part of the plans of creating stable conditions for the fishing port, we extended the port and constructed a 700-metre-long breakwater south of the port. Additionally, we reconstructed and extended the existing breakwater north of the port by 70 metres.

New West Port

The 700-metre-long new southern breakwater and the extension of the existing breakwater north of the port allowed the construction of a new and larger outer port. The West Port consists of 170 metres of new quay and 18,500 square metres of new hinterland. The harbour basin is established with a water depth of six metres, and the quay structure has been prepared for a roll-on/roll-off ramp. The construction of the 2 breakwaters also involved installation of 650 tons of sheet piles and anchoring of these.

Heavy machinery in use

For the construction of the breakwaters, we used 2,800 concrete groyne blocks as well as quarry stones of the type Norit and granite. For the project in Hvide Sande, we have supplied a total of 300,000 tons of rock material which has been sorted in Norway and Sweden and then sailed to Hvide Sande. We used a Hitachi Zaxis 870 LCH excavator to carry out the challenging job of lifting the up to 24-ton-heavy rubble stones and placing these correctly. Fully equipped, the dead weight of the excavator is 155 tons, and the shovel alone weighs 5 tons. So the machine was the perfect choice for lifting and placing the rubble stones.

Work subject to the vagaries of the North Sea

When we constructed the 700-metre-long outer breakwater, our work was to some extent subject to the vagaries of the North Sea. Often, there are high winds and large waves along the Danish west coast. Several of our work activities required a calm sea, so we had to be flexible and work when the sea allowed this. This meant that we often had to work outside normal working hours, either early in the morning, late at night or on weekends.



Data

- 70,000 m³ of core filling and rubble stone
- 40,000 m³ of filter stone (0.5-3 tons)
- 42,000 m³ of cover stone (3-13 tons)
- 16,000 tons of cover stone (16-24 tons)
- 2,800 concrete groyne blocks
- 55,000 m³ of dredging
- 650 tons of sheet piles and anchors

- 600 m³ of reinforced concrete
- 18,500 m² of pavings.

Client

Port of Hvide Sande

Type of contract

Main contract

Contractor

Aarsleff-VG J.V. I/S

Cooperative partners

VG Entreprenør A/S

Consulting engineer

COWI

Construction period

May 2011 to May 2013

Contract value

DKK 128 million

Contact

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