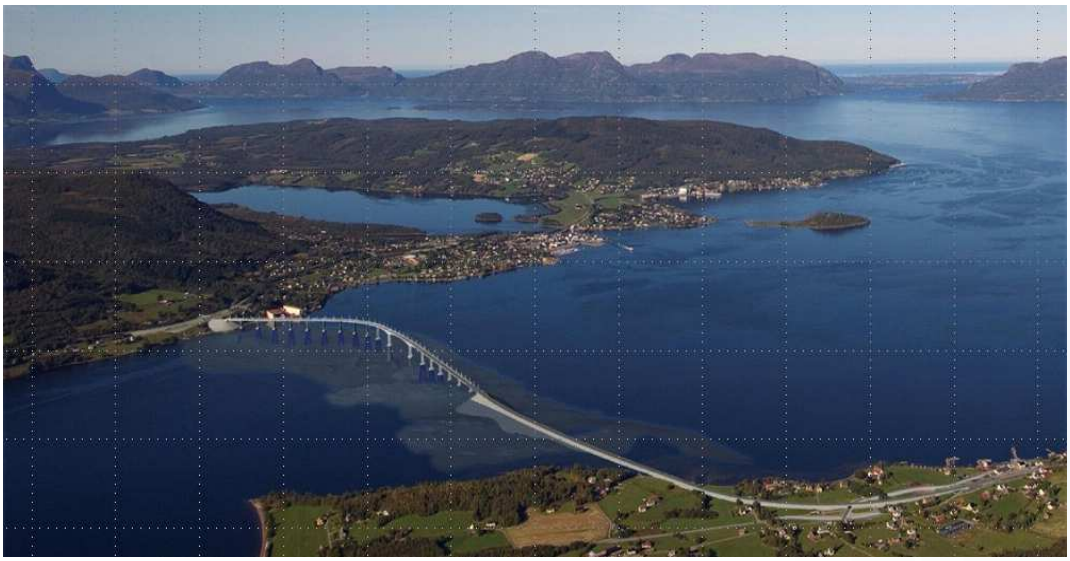
REFERENZ HARBOUR CONSTRUCTION AND MARINE ENGINEERING

Foundation Tresfjordbrua - Norway



The Tresfjord Bridge (Tresfjordbrua in Norwegian) forms part of the approximately 20-kilometer-long extension of the E 136 (Exportvägen) motorway between Åndalsnes and Ålesund. In an area along the North Sea coast consisting predominantly of fjords and mountains, the new bridge spans the Tresfjord between the towns of Vestnes and Vikebukt and have a total distance of 1,290 meters.

In December 2012 the joint -venture Bilfinger Construction (today F+Z Baugesellschaft) and Bilfinger Infrastructure was awarded for the construction of the bridge over Tresfjord.

The contract for the construction of the bridge on behalf of the Norwegian public road administraton was estimated to be worth around EUR 75 million. Construction of the pre-stressed concrete bridge was expected to begin before the end of 2013
and was completed by 2015.

Contract Value:
13,5 € Mio (part F+Z Baugesellschaft)

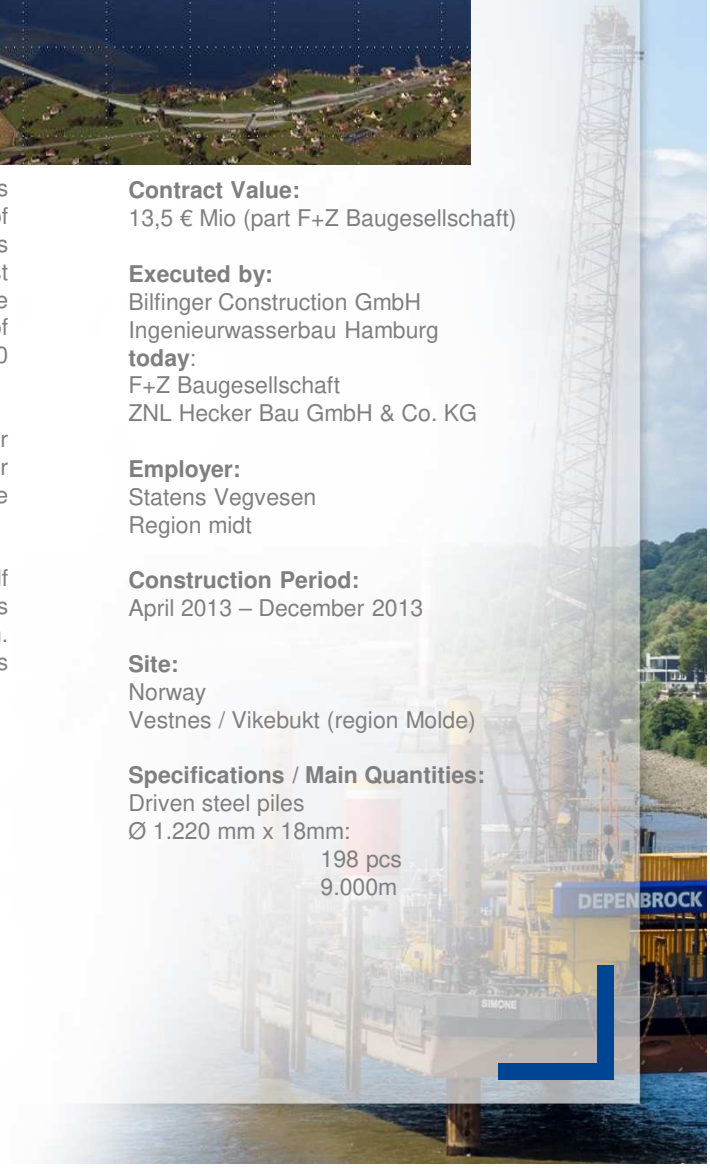
Executed by:
Bilfinger Construction GmbH
Ingenieurwasserbau Hamburg
today:
F+Z Baugesellschaft
ZNL Hecker Bau GmbH & Co. KG

Employer:
Statens Vegvesen
Region midt

Construction Period:
April 2013 – December 2013

Site:
Norway
Vestnes / Vikebukt (region Molde)

Specifications / Main Quantities:
Driven steel piles
Ø 1.220 mm x 18mm:
198 pcs
9.000m



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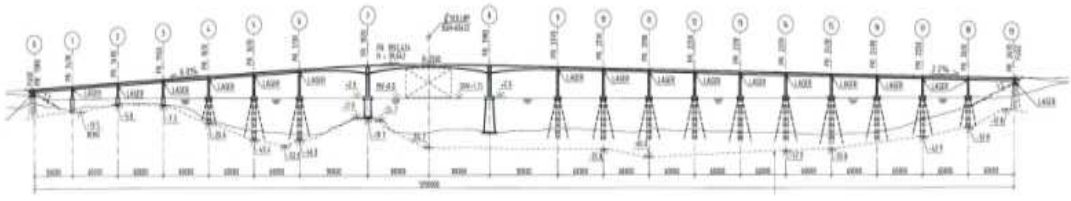
The work on the foundations in the North sea fjord, which is up to 40-meters deep, presented a special challenge to Marine. The 13 bridge piers rest on foundations that consist of specific configurations of tubular steel piles filled with concrete and measure 1.22 meters in diameter. In total a full 9.000 meters of steel tubing were needed for the piles.

Bilfinger (today F+Z Baugesellschaft) worked as a part of this joint-venture was responsible for the installation of driven steel pipe piles for the foundation of 13 bridge pillars.

The 13 bridge pillars consist of each averagely 16 concreted steel pipes with a Ø 1.220 mm and a length of 42-56 m.



Total brulengde : 50+13x60+2x90+160=1290 m	
Fri seilingshøyde	32 m
Seilingsbredde	60 m
Største vanndyp	-40 m