

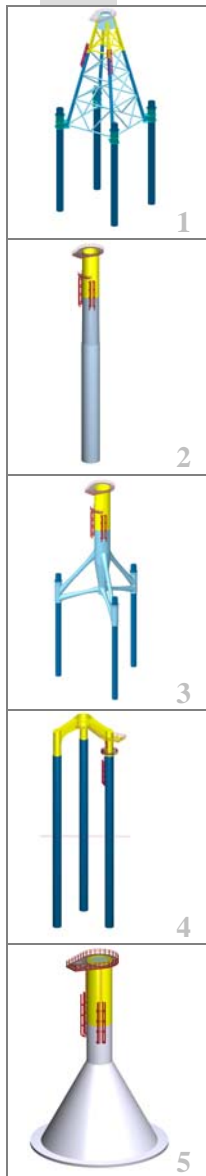
## References

**Project:** Dan Tysk Offshore Wind Farm  
 – Investigation of the Variants and Preliminary Design of the Foundation Structures

**Period:** October – December 2008

**Client:** Dan Tysk Kabel GmbH, Hamburg

**Short Description:** The planned Dan Tysk offshore wind farm in the North Sea is situated about 50 km to the west of the Island of Sylt near the border to Denmark. It is possible to install capacities of up to 1,500 MW in this area which is about 600 km<sup>3</sup> large. IMS has rendered the following services for the Dan Tysk offshore wind farm:

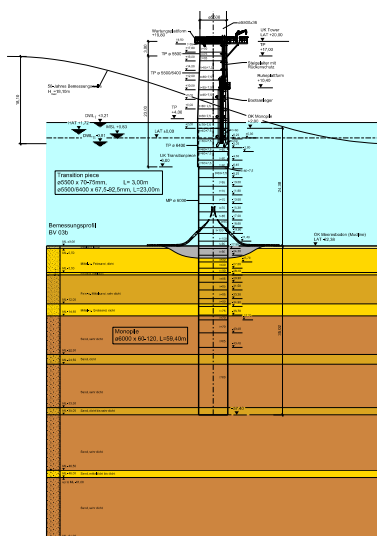


3D models

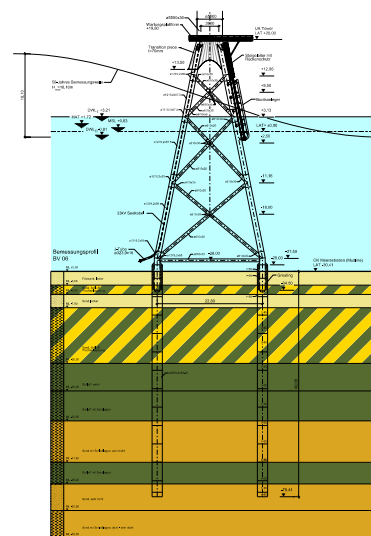
1. Investigation of alternatives for five different types of foundation for a water depth of 30 m:
  - Jacket (1)
  - Monopile (2)
  - Tripod (3)
  - Tripile (4)
  - Gravity foundation (5)

These included:

- Determination of the quantities and costs (estimation)
  - Installation costs, risks due to weather, availability of the equipment, dismantling costs
  - Comparison and assessment.
2. Preliminary design of a monopile foundation structure for approval (Stage 1) by the BSH (German Federal Maritime and Hydrographic Agency)
  3. Preliminary design of a jacket foundation structure for approval (Stage 1) by the BSH.



Monopile



Jacket