2658

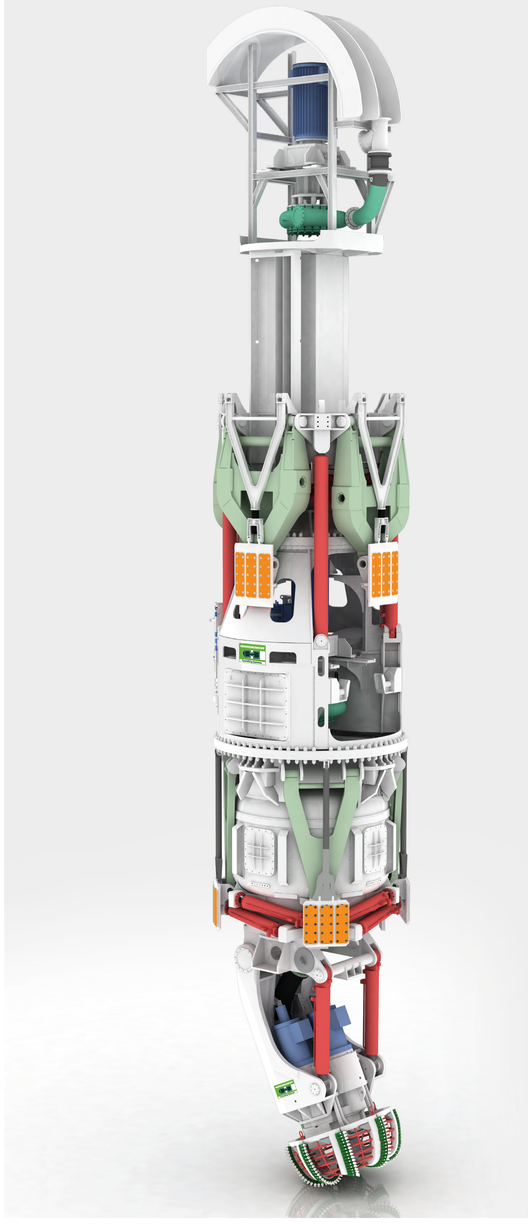
OFD® – Offshore Foundation Drilling

An Innovative Solution to Realize Offshore Foundations

Author: Boris Jung

Institution: Herrenknecht AG

› Offshore Foundation Drilling › Monopile › Noise reduction
› Environmentally friendly › Econimically



OFD® – AN INNOVATIVE SOLUTION TO REALIZE OFFSHORE FOUNDATIONS.

The new drilling concept – Offshore Foundation Drilling (OFD®) – developed by Herrenknecht AG permits the construction of offshore foundations in an economical and environmental-compatible way. The innovative system anchors the foundation structures for offshore wind energy turbines in the sea floor by drilling. By using this technology there is no need for a hydraulic hammer. Therefore this installation technic offers a solution where noise mitigation is not required. This pioneering method provides also several further advantages in comparison to conventional pile driving.

ADVANTAGES OF THE OFD® CONCEPT

- Shaft diameters between 5,5m - 7,5m for large monopile foundations.
  Also bigger pile diameters are possible with a new design of the machine.
- Application in different ground formations.
  This technic could be used in nearly every kind of geology, from sand to solid rock.
  Also an underreaming of the pile is possible.
- Reduction of noise pollution to a peak noise level of 120dB reµPa in 750m distance to sound source.
  The prediction of the noise level is based on a similar onshore working drilling technic.
  Because of not producing such high noises it is not necessary to install a noise mitigation system.
- Economical advantages:
  - Avoiding complex noise protection systems
  - > 5MW wind turbine possible due to bigger pile diameter
  - Economic design of the steel structure

Supported by:

Federal Ministry
for Economic Affairs
and Energy

on the basis of a decision
by the German Bundestag