

Project: SCN Siemens Nacelle Factory
Location: Cuxhaven
Year: 2016-2017

Design of a foundation for a production hall of wind turbines on soft soil using compacted gravel columns and geogrids



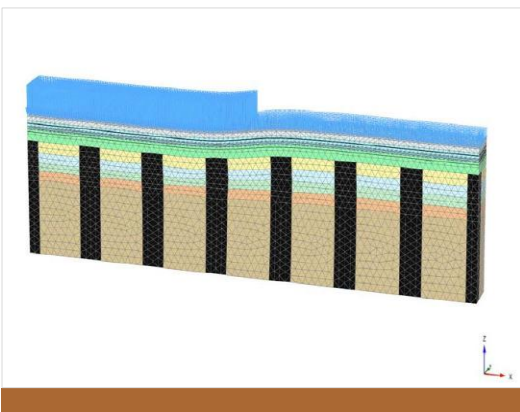
PROJECT DESCRIPTION

The Siemens AG is building a new production complex for offshore wind turbines in Cuxhaven with an area of approx. 450 m x 400 m. The area is bordered to the north by the existing North Sea dyke and to the west by the approx. 250 m distant former "Grodener Wettern". The construction project consists of a production hall founded on a pile supported base slab measuring approx. 360 m x 210 m. The surrounding, highly loaded traffic areas with widths up to 30 m consist of a staff and social complex with a length of 66.60 m and a width of 14.20 m, as well as further traffic areas, parking lots and green areas.



PROJECT FACTS

- 170.000 m² area to be constructed
- DYNIV Gravel Columns are used for soil stabilization of existing soft subgrade
- Diameter of columns approximately 1 m
- About 1.900 piles were required to set up the production hall
- A geogrid reinforced load transfer platform was used above the columns heads to minimize differential settlement



OUR SERVICE

- Design of the foundation pile supported base slab according to EBGE0
- Derivation of the relevant bedding module below the base slab of the production hall taking into account the plate construction and the soil improvement
- Usability studies using 3D finite element calculations
- Geotechnical consulting