

Efficient wind farm infrastructure on low-bearing ground



Windpark Neuenkirchen

Land Hadeln, Landkreis Cuxhaven, Deutschland

CLIENT'S CHALLENGE

For the construction of a new wind turbine as part of a repowering project, a safe access road and working platform supporting a surface pressure over 600 kPa had to be constructed. In view of the low-bearing capacity of the ground, client needed an economical alternative solution to the extensive soil replacement and expensive deep foundation measures.

TENSAR SOLUTION

Tensar proposed an engineering-tested, thin mechanically stabilised layer (MSL) with just one layer of Tensar InterAx geogrid for the access road construction to achieve project requirement of $EV2 \geq 120$ MPa. For the working platform - an MSL with several layers of geogrid was proposed. Tensar calculated the dimensions and structural analysis for the crawler crane to be used at site and carried out both the basic stability analysis and the serviceability analysis, paying particular attention to potential tilting.

B E N E F I T S

- Reliable engineering planning support
- Cost reduction 36% (approx.)
- Construction time reduction 39% (approx.)
- CO₂ emission reduction 39% (approx.)

Tensar®

A Division of CMC

PROJECT DETAILS

Constructed in
2024

Product
Tensar InterAx



Unpaved Road & Working Platform |
No. 545

PROJECT BACKGROUND

The demand of wind farm infrastructure is increasing; access roads, storage areas, assembly areas and crane sites often have to bear heavy construction load over low-bearing capacity ground. With wind turbines becoming larger and taller, it is crucial to ensure the crawler crane operates under extremely low level of inclination for safe operation.

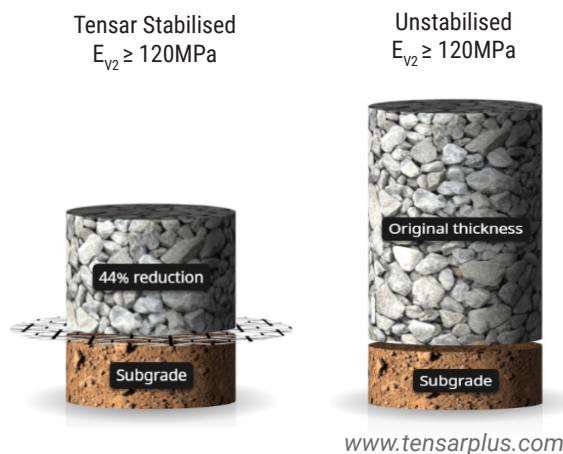
For many years, Tensar has been offering high-quality products for the construction of economical infrastructure at wind farms. With the latest Tensar InterAx products, access roads and working platforms can be built even more economically, quickly and with less environmental impact.

Our application engineering team has long established itself as a competent partner for geotechnical engineers, planners and developers in the planning and execution phases. We can take on tasks ranging from free feasibility analyses to structural analyses and other engineering calculations to implementation planning.

Tensar experts working in the region support interested professionals with targeted free seminars and training courses, as well as project-specific advice. We also provide on-site support and advice to contractors.



ACCESS ROAD DESIGNED WITH THE MODULE “ADVANCED EV2 METHOD” IN TENSAR+ SOFTWARE



let us help you with your next challenge: tensarinternational.com email: tensarinfo-intl@cmc.com



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