

Hornsea Wind Farms* United Kingdom | 2020 | 2.6GW

Case study



The world's largest offshore wind farm development**

North Sea's treacherous weather

Highly corrosive environment

While we actively participate in developing comprehensive testing standards for wind asset solutions, the most important measure for a coating's performance is through extensive in-field operation. This is why we present one of our track records to you along with the challenges we helped overcome.

Connecting the dots

* This relates to Hornsea 1 & 2
** At the time of construction

Hornsea Wind Farms

The world's largest offshore wind farm development*

The world's largest offshore wind farm development* - 75 miles off the east coast of the UK, close to Hull - is located in the North Sea and protected with AkzoNobel's heavy duty coatings from its International® range.

AkzoNobel's market leading coatings brand, International®, has been at the forefront of the wind industry since it began more than 40 years ago..

The developer of Hornsea projects, Ørsted envisaged the project would meet the daily energy needs of more than 2 million homes and for this they needed trusted supply partners across each aspect of the project.



Project details

Focus product	Interzone 954, Interthane 990, Interzinc 52, Intergard 269, RELEST blade coatings
Year of project	2020
Location	North Sea, UK
Project owner	Ørsted
Volume supplied	750,000 litres

Background information

It was in 2014 that Hornsea 1 gained consent for 171 turbines to be located off the coast of the United Kingdom in the North Sea.

AkzoNobel was chosen to provide protective coatings solutions for the blades, generators, foundations and substations across this vast wind farm. The development process started in 2018, with the construction of the turbines taking place at four locations across Germany, Belgium, Denmark, and the UK. The fabricators being EEW, Bladt, Smulders, and SiemensGamesa.

Meanwhile, Hornsea 2 was granted planning permission in 2016, allowing for a further 176 turbines to be constructed and installed.

Hornsea 1 produced its first electricity in 2020, with Hornsea 2 following two years later.

The project

This project required AkzoNobel to supply coatings over several years, with 750,000 litres of paint allocated to the turbines of Hornsea 1 and 2.

A single foundation piece takes three to five days to coat, with an average of two per week being completed - the project for Hornsea 1 therefore took 85 weeks just for the foundation pieces of the turbines alone.

Following the turbines becoming operational, AkzoNobel committed to a regular schedule of maintenance and inspection of the site where the condition of all coatings are monitored and recommendations made.

Our products

The foundations of the turbines (which tower 204 metres above sea level) have been coated with Interzone® 954 from the AkzoNobel International® brand.

Interzone 954 has a unique blend of benefits, including excellent barrier protection, exceptional abrasion resistance and high film build. These benefits provide the peace of mind wind farm owners need and help to avoid costly repairs and touch-ups.

In addition, Interthane® 990, Interzinc® 52, and Intergard® 269 were used. The blades for these giant structures were protected using the RELEST® portfolio of coatings.

The results

With Hornsea 1 and 2 already operational, totalling 357 turbines, Hornsea 3 ready to begin construction and Hornsea 4 granted planning approval, this landmark development is the ultimate proof point of AkzoNobel's credentials in the wind sector. Hornsea 1 and 2 provide enough energy to power more than 2.4 million UK homes with renewable energy.

The project has played a key role in the development of a larger and sustainable UK energy supply chain that will support the next phase of the UK's offshore wind evolution.

Andreas Hoyer, AkzoNobel Global Sales Manager for Wind Energy, says: **“This is a fast-developing industry and we are extremely proud to have been involved in this project. We are delighted at how our products are performing in the often harsh environment of the North Sea and Hornsea's success has opened further doors for AkzoNobel to expand in the wind sector globally.”**

Connecting the dots - Unleashing the full power of wind energy.

* At the time of construction

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