

## BELZONA 5721 - LEADING EDGE PROTECTION FOR COLD WEATHER BLADES

### CUSTOMER

Wind Farm, Norway

### APPLICATION DATE

2020

### APPLICATION SITUATION

The Wind farm required a Leading-edge protection solution for in-Situ application in a cold-weather environment. The applicators wanted a solution that could be applied quickly whilst offering excellent rain-erosion resistance.

### PROBLEM

The asset had suffered from Erosion on the Wind turbine blades leading edges. This erosion, over time, can lead to a drop in the aerodynamics which leads to a reduction in the turbine energy output. This can account for anything from 5-20% loss in asset efficiency annually. Because of the cooler climate, traditional LEP coatings would have struggled to cure in ambient conditions.

### PRODUCTS

Belzona 5721

### SUBSTRATE

Fiberglass / Gelcoat

### APPLICATION METHOD

The application was carried out in accordance with a modified version of Belzona Know-How System Leaflet FBC-1. The blades were coated on the turbine at the operation site. The pitting and loss of surface on the leading edge was resurfaced with a filler product and rebuilt to dimensions. The surface area was sanded down with a mechanical sander and cleaned with a rag and non-residual solvent cleaner. One coat of Belzona 5721 at 20 mils (508µm) was applied.

### BELZONA FACTS

After several demonstrations and trial phases, the Wind farm operators found that Belzona 5721 was very easy to apply and left a great smooth finish. The local Belzona distributor was able to offer an on-site training service to get the maintenance team familiar with applying the product. As Belzona 5721 is able to be comfortably applied at temperatures down to 5c this leaves the operators a larger weather window in the year where this type of repairs can be conducted. The solution will save the Wind farm operators money and time on lost efficiency and asset downtime.

### PICTURES

1. Product Training - Kit
2. Surface Preparation
3. Application in Progress
4. Norwegian Wind farm



1.



2.



3.



4.

For more examples of *Belzona Know-How In Action*, please visit <http://khia.belzona.com>

ISO 9001:2008  
Q 09335  
ISO 14001:2004  
EMS 509612

Belzona products are  
manufactured under an ISO  
9000 Registered Quality  
Management System.

[www.belzona.com](http://www.belzona.com)

  
**BELZONA**<sup>®</sup>  
Repair • Protect • Improve