

Belzona 5721 - Leading edge protection for cold weather blades

ID: 8398

Industry: Power
Application: FBC-Fans, Blowers and Compressors

Customer Location: Wind Farm, Norway
Application Date: 2020

Substrate: Fiberglass / Gelcoat
Products: * Belzona 5721 ,

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.



Photograph Descriptions

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

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.

Application Method

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

ISO 9001:2015
FS 695214
ISO 14001:2015
EMS 695213

Belzona products are
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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 Windfarm 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 Windfarm operators money and time on lost efficiency and asset downtime.

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