

# Belzona Repairs Wind Turbine Shaft in Place

ID: 7502

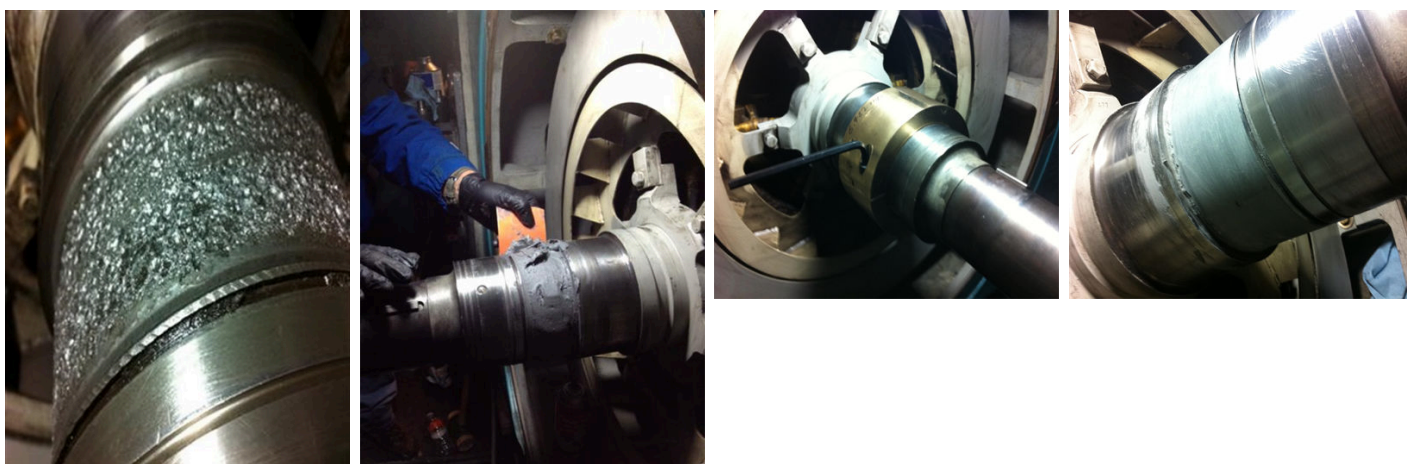
Industry: Power  
Application: FBC-Fans, Blowers and Compressors

Customer Location: West Texas, USA  
Application Date: December 2011

Substrate: Carbon Steel  
Products: \* Belzona 1111 (SuperMetal) ,  
\* Belzona 9111 (degreaser) ,  
\* Belzona 9411 (Release Agent) ,

## Problem

The shaft in this wind turbine at a wind farm was not grounded properly causing electrolysis damage. The damage was considerable and was destabilizing the turbine.



## Photograph Descriptions

- \* 1. Shaft damage by electrolysis. ,
- \* 2. Shaft with Belzona 1111 being applied ,
- \* 3. Shaft with copper former while Belzona 1111 is curing. The release agent was applied on the former. ,
- \* 4. Former removed and the application is now completed. ,

## Application Situation

Wind Turbine Shaft on Wind Farm

## Application Method

The application was carried out in accordance with the Belzona System Leaflet FBC-13. A brass cast former was made to the exact dimensions of the shaft repair.

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  
manufactured under an ISO  
9000 Registered Quality  
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## Belzona Facts

The Customer was very pleased that the Belzona solution offered prevented them from taking the turbine apart and bringing it to the ground. Two other options were considered originally: 1.Call a crane company and replace the generator shaft. Cost - \$300,000.00 2.Call a crane company, lower the generator, ship it to a shop and repair by welding. (Includes stress relieving, and straightening) Cost - \$275,000.00. Additionally, both options would have caused a downtime of 2-3 weeks.Cost of application, including labor,(\$5000 brass, reusable former), 1111 2kg, 9411 and 9111 < \$10,000.The method is now standardized over the energy company's wind farms and the contractor has 10 different size formers(all reusable) for the different size shafts that they have repaired with Belzona. There were \$250K savings in comparison to a traditional repair.

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