## **BELZONA KEEPS WIND TURBINES SPINNING**

ID: 5642

Industry: Power Customer Location: Wind Farm, Teesside, UK

Application: VPF-Valves, Pipes and Fittings Application Date: September, 2014

Substrate: Steel

Products: \* Belzona 1161 (Super UW-Metal),

\* Belzona 5831 (ST-Barrier),

#### Problem

Many of the flanges were not gas tight. Changes in tide led to dangerous gases seeping from the seabed and into the chamber. A temporary sealant had been applied but could not effectively seal the leaks and a permanent solution was required.









# **Photograph Descriptions**

- \* View of the wind farm,
- \* Leaking flange,
- \* Second leaking flange,
- \* Belzona solution applied,

#### **Application Situation**

27 offshore wind turbines. Each turbine has between one and three hang-off flanges.

#### **Application Method**

Belzona, Belzona's UK application division, was signed on to carry out the repairs with the application in accordance with Belzona Know-How System Leaflet VPF-11. After removing the temporary repairs and preparing the surfaces, Belzona 1161 was used to pack the joint and seal the nuts and bolts using caps filled with product. Two coats of Belzona 5831 were applied onto the flange tops and bottoms to ensure a lasting protection and to eliminate any risk of leaks.

### **Belzona Facts**

When choosing a repair material, the site manager had to bear in mind the restricted access affecting surface preparation as well as high humidity, eliminating the potential use of polyurethanes. After careful consideration, they settled on the use of a Belzona

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FS 695214 manufactured under an ISO
ISO 14001:2015 9000 Registered Quality
EMS 695213 Management System.

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surface-tolerant leak sealing system. After more than a year in service, the repair is performing well with no reported leaks or damage to the flanges. The use of a surface-tolerant composite and coating ensured that the repair could be carried out quickly regardless of surface moisture or contamination as these materials bond exceptionally well to oily or greasy surfaces and even underwater.

