

# BELZONA TRANSFORMER LEAK REPAIRS ON TERTIARY BOX

ID: 4223

**Industry:** Power  
**Application:** VPF-Valves, Pipes and Fittings  
**Substrate:** Mild Steel  
**Products:** \* Belzona® 1221 (Super E-Metal) ,  
\* Belzona® 1161 (Super UW-Metal) ,  
\* Belzona® 5831 (ST-Barrier) ,

**Customer Location:** Electricity Substation, UK  
**Application Date:** September 2012

## Problem

The transformer had been suffering from extremely high losses of transformer oil. Following a site survey, oil discharges were evident at many of the flange and bolt joints to equipment located to both the interior and exterior of the noise enclosure. The root cause of the oil leaks was found to be the tertiary box located in the noise enclosure on the rooftop.



## Photograph Descriptions

- \* Tertiary Box during survey ,
- \* Completed application ,
- \* Completed application ,

## Application Situation

Exterior/Rooftop of Super Grid Transformer Tertiary Box

## Application Method

The application was carried out in accordance with modified versions of Belzona Know-How System Leaflets VPF-8 & 11. The tertiary box substrate was prepared before Belzona® 1221 was used to stem any active oil leaks. The flange joint was sealed using Belzona® 1161 incorporating Belzona® 9341 (Reinforcing Tape). Bolt and nut heads, together with male studs were protected by either bridging tape or tight fit former, then fully encapsulated using a disposable former containing Belzona® 1161. Following the curing process, the formers were removed and all of the repair areas were coated with Belzona® 5831.

## Belzona Facts

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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The leak sealing project was successful. In recharging the transformer with oil to the correct level, neither the flange or bolt heads showed any visual evidence of further leakage. The clients request that the studs be protected prior to encapsulation of the bolt heads was also met.

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