

# Main Station Transformer flange sealed with Belzona 3412

ID: 9329

Industry: Power  
Application: GSS-Gaskets, Seals and Shims  
Substrate: Carbon steel  
Products: Belzona 3412, Belzona 8411

Customer Location: Ireland  
Application Date: March 2023

## Problem

The area around the top flange of the transformer was corroding. The corrosion was also effecting the bolts. The flange area has been recoated with paint on three occasions, however this had not produced a satisfactory solution. There was a gap between the flanges of approximately 10mm. This gap was up to 100mm deep. There was potential movement between the flanges due to thermal expansion or other factors.

When the paint was applied, the gap between the flanges was filled with a filler material to provide a surface for the paint to go over in this area.

If a solid filler was used, it would crack with movement between the flanges, leading to a crack in the paint and subsequent failure. If a flexible filler was used, the epoxy paint would crack if there was movement between the flanges also leading to failure of the paint.



Main Station transformer



Typical corrosion at the main flange



Close up of Belzona 3412 seal on the flange



Belzona 3412

## Application Situation

The flange had been painted several times and had continued to cause corrosion issues, including at the bolts, which needed to be replaced regularly. This was disruptive for the client, necessitating regular shutdowns of the station.

## Application Method

The existing paint and corrosion were removed by grit blasting and the flange was re-painted.

Belzona 8411 and Belzona 3412 were applied in accordance with Belzona 3412 Instructions for Use

## Belzona Facts

Belzona 3412 was the ideal solution as it would provide long term corrosion protection, would accommodate flexibility in the joint and would allow for planned inspections of the flange and bolts in the future.

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

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