

# Belzona Forms the Faces of 132 Sea Water Flanges

ID: 7879

**Industry:** Chemical & Petrochemical  
**Application:** VPF-Valves, Pipes and Fittings  
**Substrate:** Steel  
**Products:** \* Belzona 1111 (Super Metal) ,  
\* Belzona 1391T ,

**Customer Location:** Petrochemical Plant, Saudi Arabia  
**Application Date:** 2018

## Problem

A new utility sea water cooling facility was commissioned 1 year ago for this plant. Already, the effects of sea water were leading to crevice corrosion on many diameters of pipe line flanges. This was leading to worn out serrations and severe damages on the seating faces. Existing FBE coating failure inside the spools was due to sea water penetration and pitting corrosion on the edges of spool. Leakages observed through various flange faces / weld seams were leading to intermittent shutdowns.



## Photograph Descriptions

- \* 1. Sea water leaking through the flanges ,
- \* 2. Flange damage on the edges ,
- \* 3. Application of Belzona 1111 (Super Metal) on the flange to form peaks ,
- \* 4. 48 inch completed application ,

## Application Situation

132 Class 150 – 14inch flange / 24inch / 26inch / 30inch / 40inch & 48inch pipe line flanges operating at 7 – 8 bar

## Application Method

The flanges were formed in accordance with VPF-17.

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

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## Belzona Facts

The customer has been using Belzona solutions for various maintenance problems before being introduced to flange face forming during a technical presentation. They then first used the “Flange face forming technique” in December 2017 for 25 48-inch and 40-inch flange faces. Due to the successful performance of Belzona formed flanges, the plant specified Belzona forming technique for all 132 damaged flanges during their recent shutdown in November 2018. Competitors tried to copy the forming technique but were ultimately unsuccessful .

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