

# Flange Face Reforming to Stop Leakage and Future Corrosion

ID: 9190

Industry: Commercial Facilities  
 Application: VPF-Valves, Pipes and Fittings  
 Substrate: Carbon steel  
 Products: Belzona 1111 (Super Metal)

Customer Location: Dammam  
 Application Date: October 2022

## Problem

The flange faces were severely corroded and leaking.



Initial condition of flanges



Flange faces rebuilt and restored using forming technique



Completed application

## Application Situation

Welding alternative solutions were not viable for the customer due to safety and quality concerns. Belzona's flange face reforming technology was introduced to the customer, who was convinced after seeing successful previous applications and case studies.

## Application Method

Grit blasting with a surface profile of 75 microns and a cleanliness of Sa2.5. A former equal to the flange dimension was prepared. Belzona 9411 Release Agent was applied to the former and allowed to dry for some time. A layer of Belzona 1111 was applied to both the flange face and released former, then the paste grade material was built up across the flange face using a Belzona applicator cut to a V-shaped contour to form a high peak in the centre line. The flange and former were bolted together and left to cure according to the IFU. When the former was removed, the required serration pattern appeared on the flange face face, as requested by the customer.

## Belzona Facts

Belzona flange face forming was adopted due to its quick installation and convenience. The customer also avoided unnecessary downtime. In addition, the solution protects the flange faces from further corrosion effects.

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

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