

## BELZONA MODIFIES FLANGES

### CUSTOMER

Germany

### APPLICATION DATE

February 2020

### APPLICATION SITUATION

Vessel required flanges to be modified to accept pipe connections when delivered to site. Due to an error at the manufacturing and design stage, raised face (RF) flanges were incorrectly welded onto the pipe inlets and outlets, these required to be flat face (FF) flanges.

### PROBLEM

The standard flange face formers could not be used so a brand new technique was created using a series of 3D printed collars that fit within the bolt holes and gave shimming of 5mm so the Belzona would cover the RF of various sizes 2, 4, 8 inch.

### PRODUCTS

Belzona 1111 (Super-Metal)

Belzona 9411 (Release Agent)

### SUBSTRATE

Carbon steel

### APPLICATION METHOD

The repair was completed with a modified version of Belzona Know-How System Leaflet GSS-06 using steel formers and 3D printed collars.

### BELZONA FACTS

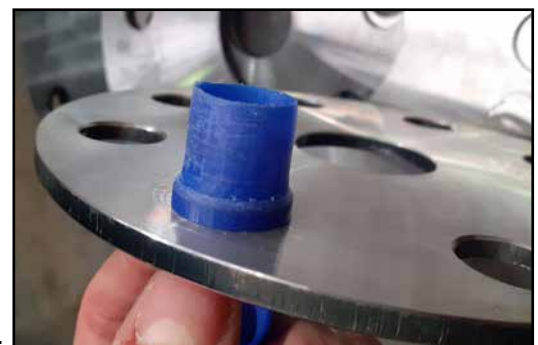
The vessel had already been manufactured and the cost of replacing the flanges at this late stage would result in late delivery of the vessel to the client.

### PICTURES

1. Shot of Vessel  
Collars within former
2. Repaired flange with nozzle insert
3. Final View of repaired flanges



1.



2.



3.



4.

For more examples of *Belzona Know-How In Action*, please visit <http://khia.belzona.com>