

# Brine Heat Exchanger Tube Face Refurbishment

ID: 9733

**Industry:** Chemical & Petrochemical  
**Application:** HEX-Heat Exchangers  
**Substrate:** Carbon steel  
**Products:** Belzona 1511 (Super HT-Metal), Belzona 1593, Belzona 9111 (Cleaner Degreaser), Belzona 9411 (Release Agent)

**Customer Location:** Teesside  
**Application Date:** September 2024

## Problem

The tube face had suffered severe galvanic and pitting corrosion and the separator channels and tube face needed to be rebuilt to prevent bypass of the separator plate. In addition, the client required a lining to prevent further attack to the tube face.



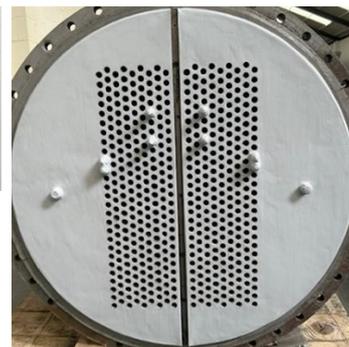
Pitting damage after grit blasting.



Belzona 1511 rebuild being profiled.



Belzona 1593 application with new tube profile.



Belzona 1593 application complete.

## Application Situation

Brine Heat Exchanger operating up to 130°C.

## Application Method

After removing the existing coating, soluble salts were removed from all surfaces prior to starting the Belzona application. Surfaces were then rebuilt using Belzona 1511, before applying the high temperature coating Belzona 1593.

The refurbishment also included the water box and cover on this same heat exchanger.

Applications were carried out in accordance with Belzona Know-How System Leaflet HEX-1, HEX-2 and HEX-3.

## Belzona Facts

Belzona 1511 is a high temperature resistant paste grade and was used to rebuild metal loss and resurface the pitted areas.

All parts of the heat exchanger were then protected with a simple brush application of Belzona 1593 which is capable of withstanding immersion conditions of 160°C.

The client was delighted with the refurbishment, which had been completed for a fraction of the cost of a replacement.

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

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