

# Belzona repairs 6 heat exchangers

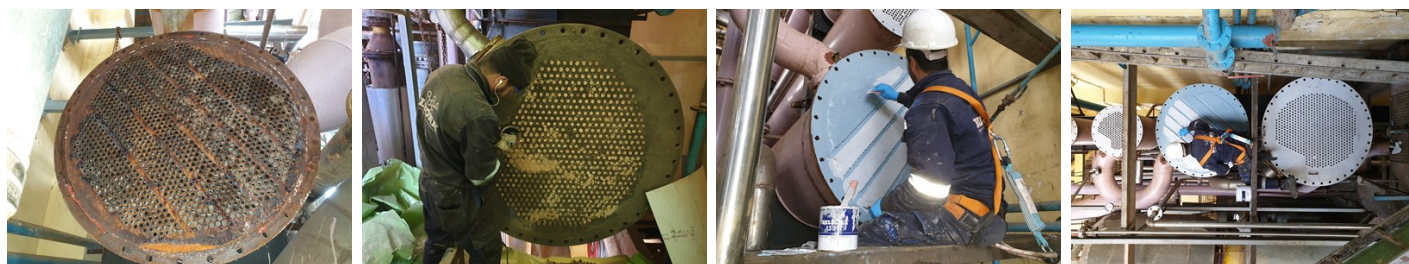
ID: 7933

Industry: Oil & Gas  
Application: HEX-Heat Exchangers  
Substrate: Steel  
Products: \* Belzona 1511 (Super HT Metal) ,  
\* Belzona 1391T ,

Customer Location: Morocco  
Application Date: March 2019

## Problem

12 tube sheets suffering from corrosion and chemical attack were exposed to elevated temperatures (up to 200°C - Dry Heat) when in service, therefore requiring a full tube sheet rebuild and protection.



## Photograph Descriptions

- \*  
\* . Initial Damaged Surface of the Tube Sheet. ,  
,  
\*  
\* Surface of the Tube Sheet once Rebuilt, ,  
,  
\*  
\* Surface of the Tube Sheet once Coated with Belzona 1391T, ,  
,  
\*  
\* Final finish of several Tube Sheets. ,  
,

## Application Situation

Heat exchangers within the food industry were corroded and suffered from severe chemical attack.

## Application Method

The application was carried out in accordance with Belzona System Leaflet HEX-01. The substrate was grit blasted and cleaned

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

Belzona products are  
manufactured under an ISO  
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using Belzona 9111. All tubes on the tube sheet were corked - using over 6000 corks. The surface of each tube sheet was rebuilt back to its original profile using Belzona 1511, a conical grinder was used to chamfer the product around each tube. Once rebuilt the tube sheet was coated using Belzona 1391T to prevent corrosion and chemical attack from the Hexane gas. Belzona 1391T is perfect for higher temperature applications such as these where the operating temperature was 120°C (up to 200°C - Dry Heat). Once the tube sheet coated the corks were drilled out and the tube sheet cleaned using compressed air.

## Belzona Facts

The only alternative for this piece of equipment would have been to replace the whole of the heat exchanger, replacement was therefore not an option. Belzona was able to not only rebuild the original profile but also prevent future corrosion and protect against chemical attack. 50KG of Belzona 1511 and 21KG of belzona 1391T were used for this project.

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