

BELZONA SOLUTIONS FOR REBUILDING AND COATING OF TUBE SHEET AND END COVER OF THE HEAT EXCHANGER

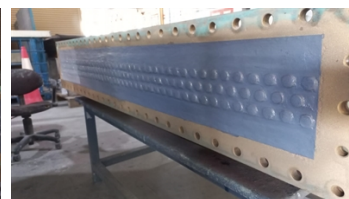
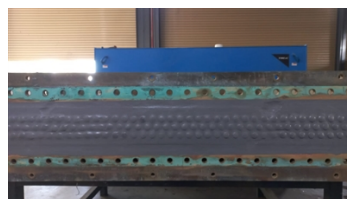
ID: 9811

Industry: Water / Wastewater
Application: HEX-Heat Exchangers
Substrate: Carbon steel
Products: Belzona 1111 (Super Metal), Belzona 5892

Customer Location: Dubai, United Arab Emirates
Application Date: February 2025

Problem

The heat exchanger tube sheet and cover suffered from metal loss and severe pitting as a result of erosion and corrosion. The customer sought a solution to repair the damage and protect the equipment from future erosion and corrosion using Belzona.



The heat exchanger tube sheet and cover suffered from metal loss and severe pitting as a result of erosion and corrosion.

The front surfaces of the tube sheet and cover (including the internal sides) were blast-cleaned to the required standards (Sa 2.5 with a minimum surface roughness of 75 µm), followed by desalination and re-blasting.

Pipes were plugged, and damaged areas were sealed with a 3–5 mm thick layer of Belzona 1111.

Belzona 5892 was then applied in two sequential coats, achieving a total dry film thickness (DFT) of 500 µm.

Application Situation

Belzona 1111 was used to create a solid, uniform surface that does not shrink or expand during curing, ensuring tight joints around the tubes. For long-term protection, Belzona 5892—a two-component, solvent-free coating designed for high-temperature performance—was applied. It offers excellent protection for both metallic and non-metallic surfaces under immersion conditions at operating temperatures up to 203°F (95°C) and can withstand steam-out conditions up to 410°F (210°C).

Application Method

The application was carried out in accordance with Belzona Know-How System Leaflets HEX-1 and HEX-2, ensuring compliance with industry best practices for corrosion protection and equipment longevity. The front surfaces of the tube sheet and cover (including the internal sides) were blast-cleaned to the required standards (Sa 2.5 with a minimum surface roughness of 75 µm), followed by desalination and re-blasting. Pipes were plugged, and damaged areas were sealed with a 3–5 mm thick layer of Belzona 1111. After curing, the plugs were sanded and removed from both sides. Belzona 5892 was then applied in two sequential coats, achieving a total dry film thickness (DFT) of 500 µm.

Belzona Facts

The repair using Belzona 1111 and Belzona 5892 was successfully completed within the client's required lead time of 2 days.

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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manufactured under an ISO
9000 Registered Quality
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