

Belzona 1341 Ensures Reliable Heat Exchanger Performance During a Major Turnaround

ID: 10120

Industry: Chemical & Petrochemical
Application: HEX-Heat Exchangers
Substrate: Carbon steel
Products: Belzona 1111 (Super Metal), Belzona 1341 (Supermetalglide), Belzona 9111 (Cleaner Degreaser)

Customer Location: Saudi Arabia
Application Date: May 2025

Problem

The customer was experiencing corrosion and erosion on the channel heads of cooling water heat exchangers. Over time, this resulted in metal loss, pitting, and surface deterioration, compromising the integrity of the equipment, increasing the risk of leakage, and reducing overall heat transfer efficiency.



General Overview of the Cooling Water Channel Heads



A heat exchanger channel head in a petrochemical plant had suffered significant corrosion-erosion, resulting in wall-thickness loss.



After Grit Blasting Surface Preparation



Completed application of Belzona 1341 (Supermetalglide) on the heat exchanger channel head.

Application Situation

The use of Belzona 1341 (Supermetalglide) to repair the heat exchanger channel head delivered significant cost and time savings compared to conventional repair methods. By enabling on-site application, it eliminated the need for dismantling, transportation, and extensive welding or machining, thereby reducing downtime and avoiding the high costs associated with replacement or traditional metal repairs.

Application Method

The heat exchanger channel head repair was carried out using Belzona 1111 (Super Metal) and Belzona 1341 (Supermetalglide), following the steps outlined below:

- Surface preparation was performed by grit blasting to achieve the required surface profile, followed by thorough cleaning with Belzona 9111 (Cleaner Degreaser).

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- Belzona 1111 (Super Metal) was then applied to rebuild the damaged areas.
- Belzona 1341 (Supermetalgilde) was subsequently applied to provide a smooth, corrosion-resistant protective coating.

All work was completed under controlled conditions to ensure proper adhesion and long-term performance.

Belzona Facts

Belzona was selected for this heat exchanger repair due to the significant cost savings it offers compared to conventional replacement or welding methods, which typically involve high labor, extended downtime, and substantial material costs. Alternative approaches, such as metal replacement or epoxy coatings, often require prolonged shutdowns and specialized equipment. In contrast, Belzona's cold-applied system minimizes downtime and eliminates the risks associated with hot work. As a result, Belzona provides a proven, durable solution that is safer, faster, and more economical than traditional repair methods.

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