

# BELZONA SOLUTION FOR REBUILDING AND COATING OF CHILLERS - 1M DIAMETER

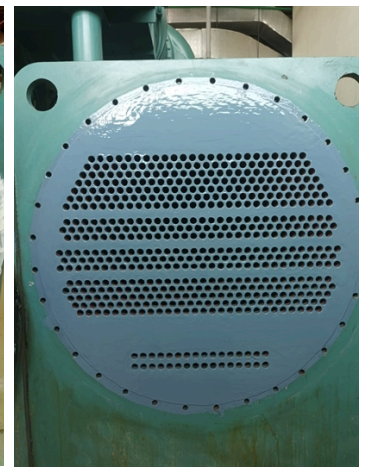
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Industry: Heating, Ventilation & Air Conditioning  
Application: HEX-Heat Exchangers  
Substrate: Carbon steel  
Products: Belzona 1121 (Super XL-Metal), Belzona 5821

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

## Problem

The tube sheet and end cover of the chiller units experienced severe corrosion, resulting in a significant decline in efficiency. Additionally, the wear around the gasket seals prevented a proper seal, further impacting the chiller's performance.



The tube sheet and end cover of the chiller units suffered from severe corrosion, leading to a notable reduction in operational efficiency.

Surface preparation and profile testing were carried out using blasting for the end covers and hand tools for the tube sheet face.

Belzona 1121 (Super XL-Metal) was used to rebuild and resurface the worn areas.

Belzona 5821 was applied as a two-coat system to protect the tube sheet and end cover from corrosion and erosion.

## Application Situation

The client selected Belzona for its exceptional corrosion and erosion resistance, which has been consistently proven over the years. Our key selling point was the extended durability that Belzona coatings provide for valuable assets. We also emphasized that merely chemically cleaning the corrosion is not a sufficient solution, as the damage continues to progress even after cleaning. Additionally, we highlighted a major advantage—the ability to return the chillers to service in less than 48 hours after the repair.

## 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 surface was grit blasted and thoroughly cleaned. Plastic/rubber plugs were inserted during surface preparation to prevent media from entering the tubes. These plugs were then removed and reapplied before the product application. Belzona 1121 (Super XL-Metal) was used to rebuild and resurface the worn areas, while Belzona 5821 was applied as a two-coat system to protect the tube sheet and end cover from corrosion and erosion.

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

Belzona products are  
manufactured under an ISO  
9000 Registered Quality  
Management System.

[www.belzona.com](http://www.belzona.com)

  
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## Belzona Facts

The customer benefited from a proven, high-performance solution that minimized downtime and enhanced the longevity of their equipment. The durability and reliability of Belzona products also contributed to lower maintenance costs over time, making it a cost-effective choice for their ongoing operational requirements.

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