

Belzona Protects Chiller at a Large Commercial Building

ID: 9909

Industry: Commercial Facilities
Application: HEX-Heat Exchangers
Substrate: Carbon steel
Products: Belzona 1121 (Super XL-Metal), Belzona 1321 (Ceramic S-Metal)

Customer Location: Houston, TX
Application Date: November 2023

Problem

Client has 4 chillers to create air conditioning for their roughly 50 story building in downtown Houston. The building was built within the last 10 years, and has seen heavy corrosion/erosion on the tube sheet from the city water. When they complete their annual maintenance checks they have seen it get worse each year. They have tried different water treatment options but have not had success in limiting corrosion to metal on tube sheet, water box, and end covers. The onsite engineering team championed using Belzona to the building developer to provide a long-term corrosion protection solution.



Chiller current condition one side



Chiller current condition opposite side



Chiller completed application one side



Chiller completed application opposite side

Application Situation

The customer chose Belzona because it will save them money on annual maintenance work by limiting hours needed for contractor to repair during down time, the Belzona coating will decrease downtime, and the coating will help prevent a major problem like replacement by adding life to the asset.

Application Method

1. Chiller was opened, drained, and dried with fans.
2. Containments were built with sheets of poly around both ends, making it air tight containment.
3. Tubes were corked.
4. Abrasive blasting was completed to achieve SSPC SP10 profile on the application area.
5. Belzona 1121 was applied to pit fill and rebuild lost metal where needed.
6. Belzona 1321 was applied in a two-coat system, grey first then blue topcoat.
7. Product allowed to cure and put back in service.

Belzona Facts

For more examples of Belzona Know - How In Action, please visit <https://khia.belzona.com>

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FS 695214
ISO 14001:2015
EMS 695213

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

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Customer plans to apply the Belzona to each of the four chillers in their central plant. This gives customer the peace of mind to not have unexpected leaks or replacement cost of a new chiller, which can be over a million dollars.

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