Corrosion Repair and Protection of Cooling Tower Piping

ID: 10351

Industry:	*Heating, Ventilation & Air Conditioning*	Customer Location:	*Orlando, Florida*
Application:	*VPF-Valves, Pipes and Fittings*	Application Date:	*June 2026*
Substrate:	*Carbon steel*		
Products:	*Belzona 1111 (Super Metal),Belzona 5811 (Immersion Grade),Belzona 5831 (ST-Barrier)*		

Problem

The cooling tower piping showed extensive external corrosion and deterioration of the existing protective coating. Several areas, particularly around welds, elbows, flanges, and connections, had significant localized corrosion and metal deterioration. The customer needed to restore the affected areas and provide long-term protection against continued corrosion and environmental exposure.



Severe external corrosion and coating deterioration on the cooling tower piping prior to surface preparation and repair.



Cooling tower piping after surface preparation, showing the cleaned steel surfaces across the elbows, straight pipe sections, flanges, and valve connections before application of the Belzona repair and protection system.



First coat of Belzona 5831 applied to the prepared cooling tower piping, providing the initial protective barrier before application of the final Belzona 5811 coat.



Completed cooling tower piping rehabilitation after application of Belzona 1111, Belzona 5831, and the final Belzona 5811 protective coat.

Application Situation

The existing cooling tower piping required rehabilitation without unnecessary replacement of the affected sections. The Belzona system provided a practical solution to rebuild damaged areas and protect the piping in place, helping reduce replacement costs, downtime, and disruption while extending the service life of the existing asset.

Application Method

The deteriorated coating and corrosion were removed and the steel surfaces were prepared for repair. Belzona 1111 was used to rebuild areas affected by localized corrosion and metal loss. Belzona 5831 was then applied over the prepared piping, followed by Belzona 5811 to provide a complete corrosion protection system. No additional topcoat was required.

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

BELZONA® Repair • Protect • Improve

Copyright © Belzona International Limited 2026

Belzona Facts

Belzona 1111 restored areas affected by corrosion and metal loss, while Belzona 5831 and Belzona 5811 provided continuous protection over the cooling tower piping. The system allowed the existing asset to be repaired and protected in place, avoiding unnecessary replacement and helping extend its service life.

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

Repair • Protect • Improve

Copyright © Belzona International Limited 2026