Corrosion Rehabilitation and Protection of 48-Inch Cooling Tower Pipeline

ID: 10350

Industry:	*Power*	Customer Location:	*Fort Pierce, Florida*
Application:	*VPF-Valves, Pipes and Fittings*	Application Date:	*May 2026*
Substrate:	*Carbon steel*		
Products:	*Belzona 1161 (Super UW-Metal),Belzona 5811 (Immersion Grade),Belzona 5831 (ST-Barrier)*		

Problem

The 48-inch cooling tower pipe had significant external corrosion and deterioration of the existing protective coating. The most affected areas were around weld seams, joints, and localized sections where corrosion had progressed and the steel surface had become damaged. The customer needed to restore these areas and protect the complete pipe section from further corrosion and environmental exposure.



Before repair – External corrosion and coating deterioration were visible around weld seams, pipe supports, and localized areas of the 48-inch cooling tower pipeline.



lose-up of severe localized corrosion and coating failure on the 48-inch cooling tower pipe, showing areas requiring rebuilding before the protective coating system was applied.



Abrasive blasting completed on the 48-inch cooling tower pipe, removing the deteriorated coating and corrosion to prepare the steel surface for the Belzona repair and protective coating system.



Completed repair and protection of the 48-inch cooling tower pipeline after application of the Belzona system and final blue topcoat.

Application Situation

Belzona provided a practical alternative to replacing the 48-inch cooling tower pipeline. The system allowed the severely corroded areas to be rebuilt and the entire pipe section to be protected in place. This approach helped reduce downtime, replacement costs, and disruption to the facility while extending the service life of the existing asset and providing long-term corrosion protection.

Application Method

The pipe was abrasive blasted to SSPC-SP10 Near-White Metal to remove corrosion and the existing coating. Belzona 1161 was used to rebuild the severely corroded areas. Belzona 5831 was then applied over the complete pipe section, followed by Belzona 5811 for additional corrosion protection. A final blue topcoat was applied to meet the customer's required finish.

Belzona Facts

ISO 9001:2015
FS 695214
ISO 14001:2015
EMS 695213

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

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Belzona 1161 was used to rebuild areas affected by severe corrosion, while Belzona 5831 and Belzona 5811 provided corrosion protection over the complete 48-inch pipeline. This allowed the existing asset to be restored in place, avoiding replacement and extending its service life.

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