Irrigation Pump Repair and Protection Using Belzona 1161 and 5111 System

ID: 10258

Industry:	*Power*	Customer Location:	*6075 Old Tampa Hwy, Davenport, FL 33896*
Application:	*CEP-Centrifugal Pumps*	Application Date:	*April 2026*
Substrate:	*Carbon steel*		
Products:	*Belzona 1161 (Super UW-Metal),Belzona 5111 (Ceramic Cladding)*		

Problem

The irrigation pump system was experiencing coating failure and localized corrosion due to continuous exposure to moisture, environmental conditions, and the chemicals circulating through the pump.
Corrosion was particularly severe around the base plate, anchor points, and lower sections of the pump, where chemical runoff and standing moisture accelerated material degradation.
Additionally, the surrounding concrete areas showed signs of contamination and deterioration caused by exposure to these chemicals, contributing to ongoing corrosion and surface damage.
If left untreated, these conditions would continue to worsen, leading to increased maintenance requirements and reduced equipment service life.



Severe corrosion and coating failure observed at the base of the irrigation pump, including rust buildup, chemical staining, and surface degradation.



Severe corrosion and chemical attack at the pump base and anchor area, showing rust buildup, staining, and coating breakdown.



Surface preparation completed and Belzona system being applied to the pump base and surrounding areas to restore and protect the structure.



Completed application showing fully restored and protected irrigation pump system with Belzona coating, providing a clean and uniform finish.

Application Situation

The client required a long-term solution to restore and protect the irrigation pump system, which was experiencing coating failure and corrosion due to continuous exposure to moisture and environmental conditions.
Previous coatings had failed, particularly around the base and lower sections of the pump, leading to ongoing corrosion and surface degradation.
The selected solution allowed for full surface preparation and the application of a high-performance coating system, providing long-term protection while extending the service life of the equipment and reducing future maintenance requirements.

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

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Application Method

All surfaces were abrasive blasted to remove existing coatings, corrosion, and contaminants, achieving a suitable surface profile for optimal adhesion.
Following surface preparation, damaged and pitted areas were rebuilt using Belzona 1161, applied to restore surface integrity.
Once completed, Belzona 5911 was applied to the concrete areas as a conditioner to promote adhesion.
A two-coat system of Belzona 5111, providing UV resistance, was then applied:
First coat in grey to ensure full base coverage
Second coat in white to allow clear visual inspection and provide a uniform final finish
The coating system was applied across the irrigation pump metal surfaces, base structure, and surrounding concrete areas, creating a fully sealed and uniform protective barrier.

Belzona Facts

The Belzona solution provided a cost-effective and long-term alternative to traditional repair methods such as replacement or conventional coating systems.
By utilizing Belzona 1161 for rebuilding and Belzona 5111 for protection, the repair was completed in situ, avoiding equipment replacement and minimizing downtime.
The seamless system provided excellent adhesion to both metal and concrete substrates, ensuring long-term resistance against moisture, environmental exposure, and chemical attack.
Additionally, the use of a UV-resistant coating system improved durability and allowed for easy inspection of the protected surfaces.
Overall, the Belzona system extended the service life of the irrigation pump and reduced future maintenance requirements, delivering a reliable and efficient solution.

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