Tank Base Sealing and Corrosion Protection with Belzona 3111

ID: 10133

Industry:	*Power*	Customer Location:	*4545 Energy Lane, Fort Pierce, FL 34981*
Application:	*TCC-Tanks and Chemical Containment Areas*	Application Date:	*December 2025*
Substrate:	*Carbon steel*		
Products:	*Belzona 3111 (Flexible Membrane),Belzona 3921 (GSC Surface Conditioner)*		

Problem

The tank at FMPA's Treasure Coast Energy Center was experiencing water ingress around the base due to a failed perimeter sealant. The deteriorated material trapped moisture between the tank chime and the concrete foundation, creating severe underfilm corrosion and metal loss in the tank's most critical structural area. A long-term solution was required to stop water penetration and prevent further deterioration of the tank bottom.



Severe corrosion discovered at the tank chime during removal of the failed sealant. Moisture trapped beneath the original joint material caused corrosion, coating breakdown, and metal loss at the base of the tank.



Rust staining observed along the tank chime, indicating moisture intrusion beneath the failed joint material and early-stage corrosion at the tank base.



Overall view of the storage tank showing the exterior condition prior to repair. Moisture intrusion at the tank base had begun causing corrosion beneath the original chime seal.



Completed Belzona tank base sealing system in place. The new flexible membrane forms a continuous waterproof barrier to stop moisture ingress and protect the tank base from future corrosion.

Application Situation

The customer was experiencing moisture intrusion at the tank base due to a failed chime seal, which had led to corrosion and metal

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loss around the annular ring. Replacing or lifting the tank would have required significant cost, heavy equipment, and extended downtime.
Using the Belzona system allowed the repair to be completed in place, without hot work or operational interruption, providing a cost-effective and long-term solution to prevent further corrosion.

Application Method

The failed chime sealant was removed to expose all corroded areas. Loose coating, rust and deteriorated material were cleaned out using hand tools. The concrete ring was abraded to create a sound surface.
Belzona 3921 Conditioner was applied to the tank wall, annular ring and concrete base. After drying, a backer rod was installed in the joint and reinforcement sheet was embedded into the first coat of Belzona 3111.
A second coat of Belzona 3111 was then applied to create a continuous, flexible waterproof membrane around the tank base. All work was completed in ambient conditions using standard hand tools—no hot work or tank lifting required.

Belzona Facts

Using Belzona 3111 provided a cost-effective alternative to replacing or lifting the tank, which would have required major equipment, shutdown time and significantly higher expense. The cold-applied membrane allowed the repair to be completed safely in situ with no hot work. The flexible, breathable system prevents future moisture ingress while allowing trapped moisture to escape, protecting the tank base from long-term corrosion and extending service life.

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