



Epoxytec System Rehabilitates a Miami-Dade Water Storage Tank

When thinking of a water treatment storage tank, one rarely envisions columns and interesting architecture. However, that's what makes the 20th Street treatment plant located in Miami-Dade County unique. This structure was built in the 1940s and contains columns reminiscent of Roman architecture, making it distinctive from other typical South Florida concrete water tanks.

The Problem

Routine maintenance determined that the structure needed to be addressed due to missing binder in the concrete, some cracks on the floor, and, most troubling, a major horizontal crack along the wall of the tank. The county called upon Epoxytec, who has been rehabilitating infrastructure for Miami-Dade Water and Sewer for over 30 years. As a trusted manufacturer of protective coatings, Epoxytec offers products that are proven to restore and protect assets, saving county residents tax dollars that would otherwise be used to replace infrastructure.

Solutions that Work

Upon inspection, Epoxytec recommended its UME System for Concrete Tanks. The system consists of a two-part coating application to address the deteriorated concrete and protect the structure from future decay and corrosion. Epoxytec's Mortartec Ceramico would be used as an underlayment to restore the concrete by resurfacing the entire floor and patching areas on the wall and ceiling. Uroflex 61 would then be applied as a topcoat to provide a protective barrier for the concrete. Any cracks that required specific attention, including the large horizontal crack along the wall, would be specifically addressed with Epoxytec CPP.

No Nonsense Applications

Epoxytec's products are effective and easy to use, reducing downtime and allowing for efficient applications. Epoxytec's certified contractor, Southland Painting, was employed to complete this job and worked side-by-side with Frank Lozano, representative

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Featured Products

Mortartec Ceramico
CPP Trowel-Liner

Uroflex 61



Project Information

Location

Miami, FL

Completion Date

April 2016

Structure

Tank

Owner

Miami-Dade Water and Sewer

Applicator

Southland Painting



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Project Name (cont.).

of the Miami-Dade Water Department. Surface preparation of the substrate was performed in accordance with SSPC-SP 13/NACE No. 6, "Surface Preparation of Concrete". Southland Painting chose to use Ultra High Pressure (UHP) hydro blasting to achieve this standard. The UHP was used in this 143.7' diameter tank at levels of up to 35,000 psi, leaving the structure clean and ready for application.

Products that Out-perform

Once the substrate was prepared according to specification, Epoxytec's Mortartec Ceramico was applied. This advanced epoxy-modified-cement technology was used to repair the damaged concrete. A high performance underlayment, it is an extremely dense matrix that will accept coatings at earlier stages than typical Portland cement repair products. Initial cure time is roughly 3-4 hours and after 36 hours the product was completely cured.

Uroflex 61 could then be sprayed at 40mils onto the entire structure, including the floor, walls, columns, and even the ceiling. Uroflex 61 contains the same properties as its sister product Uroflex; it is a semi-flexible and uniquely formulated urethane-modified-epoxy for protective corrosion resistance and sealing. In addition, Uroflex 61 is ANSI/NSF approved for drinking water.

The final step involved repairing the cracks along the wall and floor. Epoxytec's CPP was hand-troweled for this stage. As a fiber-reinforced-polymer (FRP) with high flexural properties, CPP creates reinforcement. It is highly versatile and can be used as an adhesive, patching filler, or even as a high-build, stand-alone protective liner that is surface and moisture tolerant. These properties made it an excellent solution for this particular repair.

A Final Look

Once completed, this Miami-Dade water storage tank looked better than new and the Epoxytec products used are expected to provide protection for the next several decades. Working with interesting architecture made this job exceptionally exciting for all parties involved.

The final inspection proved this project to be a success. The Miami-Dade Water and Sewer department was once again impressed by the outstanding performance of Epoxytec's protective coatings as well as the professionalism of both Epoxytec and their certified applicator Southland Painting.



