

# **Rehabilitation of Concrete Influent Pipes**

### THE PROBLEM

Severe deterioration caused by pervasive corrosion to this aging infrastructure led to the need for rehabilitation of these concrete primary clarifier influent pipes in Miami-Dade County. The three concrete pipes measure 60" in diameter and 150 ft, 300 ft, and 140 ft respectively. The condition of the structures showed signs of previous coating failures due to the harsh environment.

Cypress Construction & Coating Inc., experts in the rehabilitative industry, were contracted to complete the rehabilitation. Cypress' crew is highly trained in industrial painting and waterproofing, sandblasting, crack injections, cementitious coatings, and more. Additionally, Cypress Construction is a preferred Epoxytec certified contractor trained specifically in handling Epoxytec's rehabilitative products, CPP Sprayliner and Uroflex.

#### **PRODUCTS THAT OUTPERFORM**

#### Epoxytec's CPP Sprayliner

Epoxytec CPP Sprayliner is a two-component moisture tolerant reinforced epoxy that is highly adhesive, acid resistant, 100% solid, and high strength. Equal to "standard" CPP once cured, this version is packaged more conveniently for spray applicators seeking to utilize plural-component heated spray application. The material can be sprayed ultra-high build, between 1/8" and 1/4" (125 – 250 mils) per pass. Blended with reinforcing agents and various fibers, Epoxytec CPP Sprayliner creates reinforcement lining as a fiber-reinforced-polymer (FRP) once cured, with high strength and flexural properties for partially or fully deteriorated structures.

#### Epoxytec's Uroflex

Uroflex possesses the advantages of both polyurethane and epoxy, blended together as one technology, while incorporating cycloaliphatic curing. Uroflex exhibits superior adhesion and the tolerance and strength of an epoxy, combined with the flexibility (10-15% tensile elongation), gloss, and impact tolerance of a

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## **Featured Products**

CPP Sprayliner Uroflex



## **Project Information**

**Project Location** Miami, FL

**Structure** Primary Clarifier RCP Influent Pipe

**Completion Date** Spring 2021

Owner MDWS

**Applicator** Cypress Construction & Coating Inc.





## Rehabilitation Rehabilitation of Concrete Influent Pipes (cont.)

urethane. The epoxy system incorporates cycloaliphatic curing agents, thus enhancing its chemical resistance and crosslinking.

Uroflex is CIGMAT tested by the Department of Civil and Environmental Engineering at the University of Houston for construction and rehabilitation of civil infrastructure, undergoing a battery of modified industry-specific testing.

This unique and proprietary hybrid technology creates a coating with outperforming protective corrosion resistance. Uroflex is formulated "green," environmentally friendly, 100% solid (no VOCs, no solvent). The Uroflex coating system is easy to apply by spray, brush, or roller. It conveniently mixes in a 1-to-1 ratio by volume. Uroflex self-levels, and can be applied high build.

#### THE APPLICATION

To begin, the Miami-Dade pipes were prepped, pressure cleaned, and allowed to dry. Surface preparation was completed per SSPC SP12 / NACE No. 6 via Ultra-High-Pressure water jetting. CPP Sprayliner was applied to a minimum 125 mils (1/8") thickness to resurface pipes and create a barrier liner direct-to-concrete (DTC), followed by 2 coats of Uroflex (1st coat Beige, 2nd coat Red).

## **FINAL LOOK**

Epoxytec International Inc. has been rehabilitating and servicing Miami-Dade County's water wastewater infrastructure for over 30 years. With proven products, designed specifically for southern Florida's harsh environment, Epoxytec has consistently extended the life of their infrastructure.

This project was completed over a 2-week span for each pipe, including prep time, resurfacing, and topcoats.



