



EPOXYTEC™

Main Influent Pipe Lining, City of Tampa - Lining with Structural Epoxy at Pipe Bends

Certified contractor, Vac-Vision Environmental paired with Epoxytec to assist in a pipe lining project for Insituform Technologies® and the City of Tampa at their Howard F. Curren Advanced Wastewater Treatment Facility. The main influent pipes, 72 inches in diameter, have the capacity to bring in 96 million gallons of wastewater per day. With this kind of high erosive flow and chemical corrosive attack on the concrete, there is no doubt a high-performance liner would be needed in order to rehab, improve, and protect the structure in this environment.

A number of considerations go into a product recommendation for this kind of project. For one, the scope needed to be understood in its entirety considering that Insituform needed to approve the Epoxytec solution as a tie to their in situ sewer-grade CIPP (cured-in-place pipe). At the 90-degree bend in the pipe, the Epoxytec material had to be proven to bond unquestionably well to the CIPP liner that was planned to be inserted. In addition, the material needed to be structural, and intended as an in situ sectional liner to monolithically compliment the entire CIPP liner.

Therefore, accessibility, ease of application, bond strength, structural/modulus properties, the “tie-in” factor, and the environmental and anti-corrosive protective attributes are just a few examples of some of the evaluating data reviewed. Epoxytec suggested the use of Epoxytec CPP and Epoxytec Uroflex. Both are 2-component, 100 % solids epoxy with no VOC’s (Volatile Organic Compounds) that are ideal for confined spaces and hard-to-reach areas, such as this application.

With easy-to-use and uncomplicated logistical application methods – the material and tools were simply lowered into the opening approximately 30 feet below the surface and then carried almost 300 feet down the pipe where most of the work actually took place.

The straight sections of the pipe lining were completed by Insituform Technologies® using their proven CIPP liner; to facilitate

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Featured Products

CPP Trowel-Liner

Uroflex



Project Information

Location

Tampa, FL

Completion Date

March 2010

Structure

Pipe

Owner

City of Tampa, Wastewater Department

Applicator

Vac-Vision Environmental, LLC



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a monolithic system at the 90-degree bends of the pipe, Insituform consulted with Epoxytec for a sectional complimenting lining system.

The solution that would “tie in” to the CIPP liner was Epoxytec CPP. The CPP epoxy is the perfect solution because its adhesion is remarkable, especially to concrete and other materials with little preparation and it has a structural compressive strength of 16,000 psi.

Exterior and interior photo of the 72” rehabilitated pipe.

High flow rates and H₂S attack pose a threat to wastewater pipelines on a continual basis. Not only does Epoxytec CPP perform against these threats, but the ease of application plays a big role as well. Epoxytec CPP can be mixed by drill, troweled onto the surface, and can be applied to 100% moisture-saturated surfaces; ideal for underground water pipes that are inaccessible for the most part.

To further combat against deterioration of the pipe, especially at the seams, Epoxytec Uroflex was utilized for its extreme chemical resistance and its flexibility to allow for movement of the pipes. At the seam, anticipated movement will be bridged with Uroflex because of its 38% elongation feature. This product can also be mixed by drill, applied by brush or roller, and “tied in” to Epoxytec CPP as if it were one unit system.

When completed, a uniform coating on the laterals and into the bends was achieved. This will ensure the pipe is completely sealed and that there are no breaks in the coating along the entire pipe, an important aspect of a main influent pipeline repair that needs to be repaired and lined in one shot.

