



EPOXYTEC™

JUNCTION CHAMBER, CITY OF TAMPA WASTEWATER DEPARTMENT (TAMPA, FL, USA) – EPOXY CONCRETE REPAIR & PATCH LINER

The City of Tampa invited Epoxytec and Service Painting of Florida (certified Epoxytec applicator) to the Howard F. Curren Advanced Wastewater Treatment Plant to conduct testing and inspection of Junction Chamber #1. A visual inspection of JC-1 revealed a corrosive discovery affecting the concrete structure and the previously installed mechanical liner (T-Lock). To demonstrate and evaluate a sectional liner tie-in recommended by Epoxytec, an area of the T-Lock was removed.

The existing T-Lock liner was fairly loose and losing anchoring capabilities to the concrete. After years of service, it is determined that most of the area should be inspected to identify all areas that are compromised. Considering the “T’s” (anchors) were somewhat compromised and that the concrete behind the liner was degraded from sulfuric attack – removing the liner material by blade and hand (peeling) was done rather quickly. After removing a vertical strip of T-Lock, the exposed concrete behind it proved to have been attacked by Hydrogen Sulfide’s (H₂S) microbiological sulfuric byproduct. The sulfuric acid accumulated, in concentrate behind the liner and therefore deteriorated the concrete at an accelerated rate as compared to the concrete below the water line.

The concrete section that was targeted for rehab evaluation was prepared to utilize 35,000psi UHP hydroblasting. In addition to hydroblasting, the edges of the T-Lock remaining were top-anchored with metal termination strips. The prepared concrete section was recommended to be rehabilitated and sectionally lined with Epoxytec CPP. This sectional evaluation will demonstrate a 100% solid trowel-on epoxy to rebuild and line in a one-shot application in order to minimize downtime for a speedy, 1-step application.

The material is designed for extreme bond strength to many

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Featured Products

CPP Trowel-Liner



Project Information

Location

Tampa, FL

Completion Date

August 2009

Structure

Junction Chamber

Owner

Howard F. Curren Advanced Wastewater Treatment Plant

Applicator

Service Contracting of Florida





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materials, such as at the termination strip of existing liners, such as in this case – T-Lock.

The Epoxytec CPP is recommended in addition to the other benefits also because this chamber was left with water (sewage) in it, pumped down. CPP cures on saturated surfaces and therefore is moisture tolerant. This makes the material a prime selection in logistically challenging environments, such as in this case – where concrete is saturated, adhering to the previously installed liner is a requirement, and when resurfacing and lining need to be applied in one application.

The versatility of Epoxytec CPP for patching, sectional, repairs, rebuilding, and as a 100% epoxy liner can be observed on this project. The material is structural and cures with an impressive 16,000 psi compressive strength. In the hands of an experienced applicator – the material is applied in a short time. After the material is applied in total thickness – it is then back-rubbed with water to knock down all trowel marks, making the final coat consistent and smooth.

In hot sunny conditions, this structure could be returned to service in about 1-hour after the application. The Epoxytec CPP system (if applied in shade or at night), if needed, could be heated with hot air to force cure it faster depending on the requirements of the Owner.

Total DFT: 1/8" – 1/4" (125 mils – 250 mils).

