

# CASE STUDY SERIES

**PROJECT:** Rehabilitation of Digester, Including Crack Repairs  
**CONTRACTOR:** Carlson Young  
**ENGINEER:** LAN Inc.  
**LOCATION:** Texas  
**DATE:** Spring 2018  
**PRODUCTS:** Epoxytec CPP™ Sprayliner and CPP™ Trowelable

## Solutions for Tricky Infrastructure Crack Repairs

### The Problem

This digester located in Texas was showing severe deterioration, including deep cracks along the floor that were leaking water in areas throughout the unit. The number of cracks and leaks suggested that the water membrane underneath the slab may have aged and fatigued. Epoxytec recommended a combination of CPP Sprayliner and CPP Trowelable. CPP has been used to rehabilitate water/wastewater infrastructures throughout the country for the last three decades. It is an effective method for preventing corrosion and addressing deterioration in a single system.



### Products that Out-perform

CPP is a moisture-insensitive, highly adhesive, chemical-resistant, 100%-solid, high-strength, reinforced epoxy applied by trowel. CPP Sprayliner is equal to "standard" CPP once cured; however, this version is packaged more conveniently for those seeking to utilize plural-component, heated-spray applications. The material can be sprayed at an ultra-high build between 1/16" and 1/4" (62.5–250 mils) per pass. Blended with reinforcing agents and various fibers, Epoxytec CPP Sprayliner creates a reinforced lining as a fiber-reinforced-polymer (FRP) when cured, offering high strength and flexural properties for partially or fully deteriorated structures.

The severity of the cracks and nature of the deterioration in this digester led to the need for a creative, effective solution combining traditional CPP and CPP Sprayliner, the same proven product applied using two different methods.

## The Application

Surface preparation included abrasive blasting to achieve clean, sound, profiled concrete (in accordance with SSPC-SP 13/NACE No. 6. "Surface Preparation of Concrete").

The concrete was then sprayed with an initial coat of CPP Sprayliner to achieve an even finish throughout the substrate and to attempt to seal any hairline cracks and low-pressure leaks.



Filling in cracks using CPP trowelable

After allowing the initial coat to cure, drilling on some major leaking areas was conducted to alleviate pressure away from the cracks. Next, standard CPP was applied to these open cracks to finalize the repairs (now with no pressure).

Once the majority of the cracks were sealed and repaired and the material was cured, the contractor grouted the relief drill holes and patched them with CPP trowelable. The final step included spraying a coat of CPP Sprayliner to make all the surfaces uniform.



Cracks drilled to relieve water pressure

## A Final Look

A knowledgeable contractor combined with a proven product allowed this successful application. All cracks were addressed, and CPP Sprayliner provided sealed protection that will prevent corrosion and future deterioration. This solution resulted in an enormous cost savings for the end user and allowed a quick return to service without replacement or major reconstruction.

For more information on Epoxytec's Mortartec Ceramico, visit [www.mcor.net/mcor-5511-mcrete-corpac](http://www.mcor.net/mcor-5511-mcrete-corpac).

For more information on Epoxytec's CPP, visit <http://www.epoxytec.com/epoxytec-product/cpp/>.

To learn more about EPOXYTEC's complete product line, visit [www.epoxytec.com](http://www.epoxytec.com).

