

Reclamation Plant Concrete Gas Holder Rehabilitation

The deteriorated shell walls of a concrete gas holder threatened the usability of the infrastructure at Albuquerque Bernalillo County's Water Utility Authority. The rehabilitation of this gas holder, a vital part of many wastewater treatment plants, was a priority.

The concrete open top tank 's interior had previously been repaired and coated with an unknown material that made removal impracticable. After consulting with several different coating manufacturers, the engineer, AECOM, was faced with the reality that the existing condition of the tank, coupled with the unknown repair material, posed serious concerns for the manufacturers, who were unwilling to offer warranties. The owner was left with no manufacturer to provide coatings — until RMCI, Inc. and Epoxytec Int'I Inc. stepped up to the challenge.

RMCI Inc. is based in Albuquerque, New Mexico, and provides general contracting services to both public and private sector owners throughout the Southwest. They have a reputation as experts in construction of water and wastewater treatment plants, large-scale industrial projects, storm sewers, sanitary sewers, water systems, and large-diameter utilities. Presented with the concrete gas holder, RMCI contacted their coating manufacturing partner, Epoytec Int'I Inc. Epoxytec is a manufacturer of epoxies and protective coatings and has supplied and consulted on rehabilitation and protective solutions using epoxies, urethanes and similar technologies since 1979.

After consultation and collaboration, the RMCI and Epxotyec team came up with a viable solution for the owner. For this particular project, Epoxytec's CPP Crack Injection was specified for the seams of the gas holder and Epoxytec's CPP in both trowelable and spray form were specified as an all-in-one system.

Surface preparation included 3,000 psi water blast, sand blast, and applied hold tight to remove all salts.

Epoxytec's Crack Injection was then used to bridge the seams. The crack injection is a single-cylinder cartridge technology ideal for crack repair, small repairs, tying in manhole rings, etc.

Featured Products

CPP Sprayliner CPP Gel: Crack Injection



Project Information

Project Location Albuquerque, NM

Completion Date 2021

Owner

Albuquerque Bernalillo County Water Utility Authority

Engineer AECOM

Applicator RMCI, Inc.





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It bonds to concrete, steel, wood, brick, some plastics and most construction materials. It is moisture-insensitive and may be used on damp surfaces. It is packaged in 8.6 oz. cartridges, with mixing tip to minimize wastage and maximize performance.

Once the seams had been bridged, Epoxytec's CPP was then applied. CPP is a moisture-insensitive, highly adhesive, chemical-resistant, 100% solids, high-strength and reinforced epoxy. It comes in both trowel and spray versions. Because this substrate was in a severely deteriorated state including exposed aggregate, CPP Trowel was used as a repair material to fill in gaps and cracks of the substrate.

CPP Sprayliner was then used to resurface the entire structure. This two-component version is packaged more conveniently for spray applicators utilizing a plural-component heated spray application. When cured, Epoxytec CPP Sprayliner creates reinforcement lining as a fiber-reinforced polymer (FRP), with high strength and flexural properties for partially or fully deteriorated structures.

The walls of the substrate received 125 mils and the floor received 250 mils of Epoxytec's CPP Sprayliner.

The work was completed between October 2019 and January 2020. Cold weather was a major factor in this Albuquerque, New Mexico location. CPP Trowelable and Sprayliner had to be applied at night due to the structure's off gassing. The average temperature at night was 28°F during these winter months, so the structure was wrapped in HipWrap to provide a temporary roof, and indirect heaters were used to maintain temperatures.

RMCI's expertise and experience combined with Epoxytec's proven products allowed for successful navigation through this project.



