

CASE

Rentech, Inc. (www.rentechinc.com) owns and develops technologies that enable the production of certified synthetic fuels and renewable power when integrated with certain other third-party technologies. The Company's clean energy technology portfolio includes the Rentech-SilvaGas biomass gasification technology and the Rentech-ClearFuels biomass gasification technology, both of which can produce synthesis gas from biomass and waste materials for production of renewable power and fuels. The company has a common problem associated with these processes - wastewater and the safe storage and handling of it.

Problem.

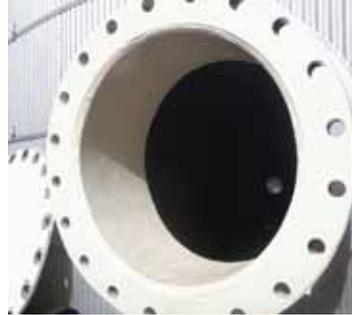
How to maintain long term integrity of wastewater tanks and piping on a cost-effective basis. Steel piping in industrial areas is generally more susceptible to corrosion. Up to now, they have generally been protected with conventional epoxy coatings that are difficult to apply, use noxious solvents, and are susceptible to stress from large variations of temperatures typically encountered in industrial locations.

In Rentech's case at the Commerce City plant, the conventional coatings were epoxy type and had failed. Tiny cracks that result from temperature extremes, or physical shock such as vibration, allow mildly acidic gaseous and/or aqueous penetration to the original surfaces, resulting in corrosion.

Solution.

Castagra's Ecodur is a sprayable coating that not only sticks very strongly to surfaces that have been properly prepared, but it also penetrates into existing small gaps and crevices, ensuring complete integrity over the entire treatment area. This is particularly important for areas where there are weld seams and bolted structures. Ecodur is wholly resistant to mild acidic and alkaline conditions that can be prevalent in industrial scenarios.

The cure time for this project was 30 minutes. A fast cure time



such as this means reduced risk of the effects of adverse weather, or condensation, and allows for the structure to be returned to full use in a very short time. Epoxy coated structures can be out of use for 24-48 hours. Being solvent free, both in the coating and the spray application, also meant no risk of toxic vapors. Ecodur is an inert, non toxic material and retains its flexibility over extremely long periods as evidenced by its marine use.

Application results

Surface preparation was standard with no problems encountered. The application was completed satisfactorily and the pre-programmed cure time of 30 minutes was achieved. In this case, the surfaces treated with Ecodur are warranted for a one year period, an identical period for epoxy coated surfaces. Ecodur readily takes to patching, if required through mechanical damage, as it bonds completely with the original application. The client not only got a cheaper protective coating job done, they also had no downtime due to there being no noxious fumes.

“Ecodur is an inert, non toxic material...”