

CASE STUDY



Ways to improve maintenance of facilities while keeping costs in check have become paramount in the wastewater industry. Coated surfaces are a frontline form of defense against degradation of equipment, tanks and critical water conduits.



Problem

A water plant facility in Clifton, Colorado, has been recoating its clarifier unit every two years at significant expense and inconvenience. A coating was needed that was considerably more robust than the conventional ones the plant had been using, as well as the need to not add any toxic burden to the wastewater stream itself, or in any way expose workers to toxic fumes that can be experienced when Volatile Organic Compounds are released during application with conventional epoxy coatings.

It was vital to limit downtime in the treatment process as this case involved the clarifier for wastewater treatment, and many coatings require three or four days for completion. Additionally, it was important that the coating could be applied during harsh, cold Colorado temperatures that can prevent the use of more conventional epoxy coatings.

Solution

Elite Protective Coatings chose to use Castagra's SG1, as it not only fulfilled the client's goal of using a sustainable coating, it also stood out for being completely non-toxic and inert in contact with wastewater. It is also NSF/ANSI 61 rated for use with potable water, VOC-free, and BPA-free.

Furthermore, it can outperform conventional epoxy coatings at extremely low temperatures. Castagra's SG1 is also notable for there being no limit to the application thickness which allows for generous coverage for cracks and other anomalies that might require additional protection. It retains a high degree of flexibility throughout its lifetime and has the unique characteristic of being re-bondable at any stage of its lifetime. This becomes especially significant if repairs are required or modifications are being made.



With its extreme adhesion, delamination is kept to an absolute minimum, whereas many epoxies fail rapidly due to micro-cracking.

Application Results

The application on a variety of surface types, including vertical, went as planned and tack dry was achieved within the standard 30-minute period. At the expiration of the 24-hour hold period following completion of the application, a final inspection was made and the coated area was formally declared fit for use.

With over 20-years of use as a marine coating on ship decks and extensive use in the wastewater industry, it is anticipated that the current regime of re-coating every two years will be significantly extended based on the performance achieved from similar applications.