

Location:

Freeport, ---

Date of Application:

August 1992

Market:

Water & Wastewater

Substrate:

Both

Surface Prep:

Clean & Dry

Exposure:

Severe Chemical Exposure -
immersion or near immersion
conditions of moderate to strong acids
caustics or solvents

Square Feet:

1000000.0

Dow Chemicals Aboveground Wastewater Treatment Facility

Area Coated: Tank Interior

- First Coat: PLASITE 4500 S

Area Coated: Tank Exterior

- First Coat: Carbozinc 11
- Second Coat: Carboguard 890 EF

Project Description:

When the largest chemical complex in North America undertook the design and construction of the world's largest aboveground wastewater treatment facility, Plasite's linings were specified for all tank and clarifier interiors. Designing a plant this size while utilizing new technology presented unique challenges to everyone involved. Working with the facility engineers and the facility coating specialists, Plasite design lining systems for the different process and clarifier tanks. This chemical complex uses and treats more than one billion gallons of wastewater every day for processing needs alone. Project engineers were to design a state-of-the-art wastewater treatment facility that would reduce the treatment time from severla days to several hours

Coating Selection Explanation:

A 100% solids, high performance epoxy lining system was applied to all surfaces. Two types of tanks were lined: domed-top closed tanks used in the processing of wastewater, and open-top clarifier tanks. The tanks varied in size and were constructed of steel and concrete. For Plasite, the challenge was to supply the lining system for 22 different tanks. These lining systems needed to be chemically resistant, cost effective, and easily applied. For the domed-top tanks, a single coat of the lining material was applied to all surfaces. The open-top clarifiers had a reinforced lining system applied to the concrete floors and transitioned approximately 18 inches up the walls. The walls were then lined with a single coat of material. The application of the lining systems was accomplished in a continuous manner that allowed the project to be completed on time and on budget.

Additional Information:

The lining systems have performed flawlessly for eight years. During a recent shutdown and inspection, the owners were delighted that the lining systems were still performing as designed. This wastewater treatment plant has set the standard for wastewater treatment in the chemical industry. Plasite's lining systems have, in turn, set the standard for the internal linings of the tanks used in the treatment process. Plasite also provided training and on-site technical service representatives for trouble-shooting.

