Electrolyte dripping from overhead pipes was destroying their steel clad tanks from the outside in. To make matters worse, there was no way for Prefinished Metals to replace steel with steel. Their plant was built around the three massive, corroded tanks.

“It’s common for our service crew members to uncover these kinds of problems,” says Michael Dunkerley, president, Chautauqua Fiberglass and Plastics, Inc. “This particular installation was a challenge because of the plant’s design.” That didn’t dissuade the people of Chautauqua Fiberglass from attacking the problem head on and after long and detailed discussions with Walbridge Coatings (Prefinished Metals’ parent company), creating a fiberglass laminate with CoREZYN® brand VE8301 vinyl ester, was the best solution. The CoREZYN VE8301 creates a strong laminate that is also impermeable to electrolytes.

John McNally of Durr Marketing was the key Interplastic consultant on the project. McNally provided the critical information and confidence that the VE8301 was the proper resin for the project. “John was always so helpful in problem solving, he went above and beyond the call of duty. In fact, he was the one who convinced me that CoREZYN vinyl esters are the best in the business,” says Dunkerley. “I don’t use anything else.”
The replacement tank was 12-feet in diameter by 60-feet long. Chautauqua bought 3/4-inch thick, filament wound pipe, also made with CoREZYN VE8301, from Augusta Fiberglass. In their own shop, they fabricated molds from steel with three-inch wide by two-inch thick flanges on the ends. The finished tank was built in ten-foot pieces and had five flanges plus dome ends on the first and last pieces. A gutter was also built around the tank so that if any electrolyte did drip on the tank, it could be collected and pumped back into it.

Crews dismantled one of the corroded steel tanks and hauled it out with a monorail crane system and forklifts. Each piece of the new fiberglass tank was brought into the plant, bolted together on the outside and laminated on the inside to create a seamless, corrosion barrier. Production took about twelve weeks but installation only took four days. “Their mill gave us ten days - over the July 4, 1996 holidays - to complete the installation. You can bet they were pleased to regain six working days,” commented Dunkerley.

The new fiberglass tank was on a one-year trial and at the end of the twelve month period, an independent fiberglass engineering firm was hired by Prefinished Metals to evaluate it. The tank was corrosion-free and so Chautauqua was given the green light to build two more tanks, which were installed over the July 4, 1997 holidays. “Twice a year, an outside firm continues to check the integrity of the tanks and at the last report, there was still no sign of any degradation. The tanks are perfect and we expect a 15-year life from them,” concluded Dunkerley. “That, by the way, is a 15-year, maintenance-free life.”

Sharpsville, Pennsylvania, is home to Chautauqua Fiberglass & Plastics, Inc. What began as a one-man shop making sailboats, is now three divisions strong. Chautauqua specializes in electroplating, fume exhaust and air pollution equipment.

Interplastic Corporation is a specialty chemical company with its headquarters in St. Paul, Minnesota. It is focused on the production and distribution of unsaturated polyester resins, vinyl ester resins and gel coats for the composites and cast polymer industries. Their CoREZYN brand vinyl esters are known for their strength, durability and superior corrosion resistance.