

## International Paper Riegelwood, NC

**Industry:**

Pulp and Paper

**Technologies:**

Brick lining with urethane membrane that lines the steel to protect it from corrosion. The brick was laid in vinyl ester mortar, a corrosion resistant mortar.

**Contract Admin:**

CoroTech was contracted directly by the customer.

### Application

Due to exterior corrosion, replace multiple areas of a carbon steel tank shell. The interior of the tank has a membrane and acid brick lining. Steel replacement must meet API 653 code requirements. Chimes (portions of steel at tank footings, exposed to outside elements) on some of the bleach towers were corroded and needed replacement. The project included shutting down the tanks and required around-the-clock work to complete the project as quickly as possible.

### Challenges

The project must be completed in a 5 day window working with multiple contractors. The location of the repairs dictated the necessity of supporting 65' of brick lining above these areas. To replace the chimes, the bottom section of steel wall and the floor had to be removed. CoroTech removed the brick and concrete in the area, and the steel contractor removed the three-to-four foot section of wall and floor for tank repair. After the steel repairs were done, CoroTech replaced the brick and concrete.

### Solution

Working around the clock CoroTech install support steel to stabilize the tank brick lining. The brick was removed from the areas of repair. The carbon steel shell was cut and removed from these locations. New material was located into place and welded in accordance with API653. After welding CoroTech abrasive blasted the exposed steel, installed a vinyl ester/urethane membrane system and then re-installed the acid brick lining. CoroTech was able to minimize facility down time by mobilizing skilled technicians and engineers to swiftly complete the project in a tight time frame.

### Results

The defective areas were removed and replaced on schedule in accordance with API code requirements. No contractor coordination issues arose during the project and the vessel was put back into service

- Working day and night to meet deadlines and complete shutdown in as short amount of time as possible.
- Coordinating efforts and schedules with another contractor.
- CoroTech needed to send out two mobilizations, one to tear out the brick lining and one to install the new brick and tile, working in tandem with the steel contractor.
- Difficulties presented in working inside a confined space.