



Project: Dominion Pipe *Pipe Strengthening*



Location: Yorktown, VA



Description of Work

The Tyfo® Fibrwrap® System was used to strengthen and rehabilitate this large diameter steel pipe.

The 120" diameter steel pipe at this power plant was severely rusted due to the corrosive environment. A repair solution was needed that could withstand the harsh environment and be installed with minimal shut down time at the plant.

A repair solution was designed using the Tyfo® Fibrwrap® System. One layer of the Tyfo® SEH Glass Composite System was installed longitudinally in the pipe. This was followed by one layer of the Tyfo® SCH Carbon Composite System. The glass composite provided strength in the longitudinal direction as well as acting as a dielectric barrier between the steel and the carbon fibers. Small crews certified to work in confined spaces installed the composite materials during regularly scheduled shut down times. A unique scaffolding system was designed to allow access to all sides of the pipe at one time. This ensured that the circumferential layer of the composite could be applied continuously around the pipe.

The FRP Composite Solution to this pipe deterioration provided a quick repair technique to repair the deteriorated steel. There was minimal impact on the power plant operations and the solution will hold up well in this aggressive environment.

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