



AN ENGINEERING DESIGN SOLUTION FOR NUCLEAR AND FOSSIL POWER PLANTS



DIAMOND WRAP® - A PIPE AROUND A PIPE

SEVERE EXTERNAL CORROSION ATTACK

Concrete circulating water lines are attacked inside and out leading to increased risk of pipe failure. Typically loose material and cracks are carefully cleaned and filled prior to installation of the wrap.

SLS EPOXY SYSTEM DESIGNED FOR APPLICATION

The exterior of this pipe will be fully restored and protected from corrosion after Diamond Wrap® has been installed. SLS Epoxy Systems™ developed for Diamond Composite Systems™ are designed for a variety of applications in the patching of pipe. It can be applied to wet or damp surfaces.

SEVERE EXTERNAL CORROSION ATTACK / FLANGE GASKET BLOWOUT

Blue SLS System is applied, with Diamond Wrap® carbon over the top. Design calculations take into consideration pressure and span support, to determine the required number of layers of Diamond Wrap®. Pressures in excess of 2000 psi can be achieved.

A SOLUTION FOR ALL PIPE CONFIGURATIONS

Diamond Wrap® can accommodate above grade piping systems that require a system that can be installed on tees, elbows, valves, vessels, long sweeping bends and other more complex geometries.

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DIAMOND LINER™ - A PIPE WITHIN A PIPE

INTERIOR OF 144" SEVERELY CORRODED PIPE

Diamond Liner™ is a fully engineered solution for large diameter pipes. It uses the existing pipe form to create a new pipe within a pipe, capable of handling required loads of the original pipe design, even if it is totally eroded. The circulating water line in this photo had an operating pressure of 100 psi.

INSTALLATION OF EPOXY AND CARBON COIL

The Diamond Liner System™ begins with a layer of SLS Epoxy System™, followed by installation of specified carbon coils manufactured for the application. Citadel patented composite design uses proprietary technology of 100% solids epoxy and high tensile strength carbon.

FINAL LAYER OF SLS SPRAYED OVER CARBON

Strength of the Diamond Liner System™ is increased as a final layer of SLS Epoxy System™ is applied over the carbon. Installation is completed without excavation or demolition of the existing pipe in a matter of days.

DIAMOND LINER™ IMPROVES FLOW

Diamond Liner™ restores and improves flow characteristics of the rehabilitated pipe where many older power plants are experiencing failure in circulating water systems. Diamond Liner™ is a safe and cost effective alternative to pre stress wires and steel that will corrode, leading to the failure of buried pipe.

