

REFINERIES & PETROCHEM

HIGHLIGHTED PRODUCTS



SYNTHO-GLASS® XT

Pipeline Integrity Restoration System

Syntho-Glass XT system is a unique pre-impregnated, bidirectional composite used to repair and reinforce both internal and external corrosion on pipelines or structures without expensive and time consuming shutdowns. The initial development of this system was designed to conform to both the ASME PCC-2 and ISO TS24817 standards for nonmetallic reinforcing solutions. This extreme strength design minimizes the time and cost of refurbishment by reducing the time to repair, as well as the replacement cost. When used with the appropriate primary coating, it enables one to repair and reinforce virtually any geometry in minutes.



VIPER-SKIN™

Carbon Fiber Pipeline Integrity Restoration System

Viper-Skin is the first biaxially, hybrid carbon and glass fiber polyurethane prepreg system that blends the unsurpassed strength and stiffness of carbon with the ease of use of a moisture-cured prepreg. This carbon fiber reinforcement composite system uses a micro-controlled, wet-out process. As a result, nearly perfect resin content and maximum, repeatable strength properties are attainable. The time and cost associated with field wetting of the composite is removed from the equation altogether and the moisture-curing properties allow for underwater and wet environment applications. The Viper-Skin solution conforms to all shapes, welds, and irregular geometries, and one size can be used on a variety of pipe diameters.



SYNTHO-GLASS® UP

Repair Kit for Active Pipe and Joint Repair

Syntho-Glass UP Repair System was specifically designed for under pressure leak repair applications on copper, steel, SS, PVC, FRP, clay, concrete, rubber, and more. By combining the original Syntho-Glass product, with the extremely chemically resistant Syntho-Steel™ and unique Pressure Sealing Rubber Tape, this offers the geometric flexibility to repair joints, tees, couplings, and pinholes. This complete system simplifies the application process and is prepackaged to accommodate pipes up to 10 inches in diameter. Larger repair applications can be engineered to meet your requirements.



SYNTHO-SUPPORT™

Superior Protection for Pipes at Supports

Syntho-Support has been specifically designed to be a superior wrapping system for pipe support areas to prevent future corrosion and abrasion due to crevice corrosion, galvanic corrosion, heat affected zone corrosion, and vibration abrasion. This system, when used with a corrosion coating of your choice, provides exceptional mechanical and impact protection on steel (CS & SS), galvanized, concrete, FRP, iron, PVC, wood. Syntho-Support can be used underwater, underground or above ground pipes and piles. Syntho-Support is used for corrosion/abrasion prevention only and is not intended for the repair of integrity damage.



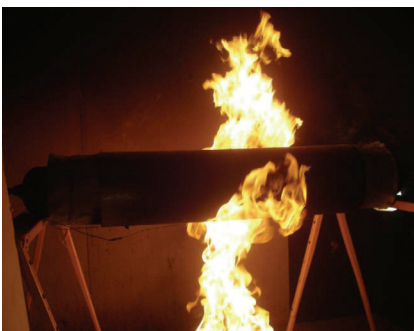
Innovative Composite Solutions



THERMO-WRAP™

Composite Repair System for High Temperature and Process Piping

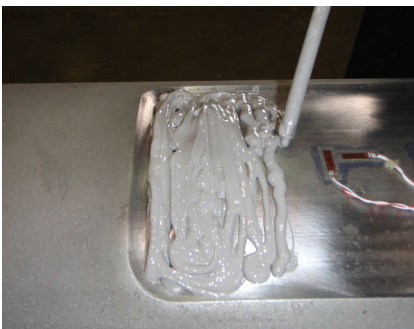
Thermo-Wrap is a custom engineered composite system utilizing a high strength, bidirectional, woven fiberglass tape in conjunction with NRI's proprietary Thermo-Poxy epoxy system for the repair and restoration of pipes operating at elevated temperatures. This composite system was designed and tested to repair defects in accordance with the ASME PCC-2 and ISO TS-24817. Thermo-Wrap is specifically designed for repair applications which require the composite to maintain the high design strengths in high temperature environments, while still curing under room temperature conditions.



COMPOSITE GUARD™ FP

Composite Fire Proofing System

NRI's Composite Guard FP System utilizes nano-technology to create an integrated fire proofing system for application on high risk piping within fire proofing zones in refineries and on offshore platforms. The Composite Guard FP System protects the composite repair under extreme fire conditions by creating a barrier between the external flame temperature and the composite repair's outer substrate. The extremely low thermal conductivity of the barrier prevents the composite repair system from reaching temperatures exceeding the maximum temperature rating, preventing degradation or failure of the composite.



SYNTHO-POXY™ HC

Two-Part Epoxy Compound

Syntho-Poxy HC is a two part epoxy compound that cures quickly at room temperature. Its high compressive strength makes it very suitable for repairing pitted metal and steel surfaces that are subjected to high pressure. The mix ratio of Syntho-Poxy HC resin to hardener is 1:1 by weight and volume. When fully cured, the material produces a durable, resilient bond that is resistant to many solvents and adverse environments.



SYNTHO-SUBSEA™ LV

Low Viscosity, Self Leveling, Underwater Epoxy Mastic Sealant System

Syntho-Subsea LV Epoxy is a unique blend of liquid epoxy, polymer, and aliphatic polyamine curing agents that is able to displace water from wet surfaces in order to make a permanent bond. The formulation is solvent-free to ensure safety and maximum technical performance. Kevlar® fibers are incorporated for reinforcement and viscosity management to achieve high-application rates - even underwater. Provides permanent protection under the most adverse conditions, the formula is uniquely field-friendly and uses advanced, low-toxicity ingredients in a high-build brushable/rollable product. Syntho-Subsea LV Epoxy can be shipped non-regulated by USDOT, IATA, and IMO.

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