

# CIVIL

## HIGHLIGHTED PRODUCTS & SERVICES



### TITAN™-218

#### Bi-Axial Carbon Fiber Structural Repair System

The Titan™-218 structural repair system is comprised of a unique, bi-axial carbon fiber fabric, saturated with NRI's proprietary epoxy system, Titan™-Saturant Epoxy. The Titan-218 carbon fiber is oriented in the 0° / 90° directions with the 0° direction being the primary, continuous fibers. The Titan-Saturant Epoxy system is a two-part, 100% solid epoxy system designed for use in a wide variety of environments possessing excellent chemical resistance and high temperature ratings. The development of this system was designed to conform to ACI440 standards for nonmetallic composite reinforcing solution of concrete.



### TITAN™-118

#### Uni-Directional Carbon Fiber Structural Repair System

The Titan™-118 structural repair system is comprised of a unique, uni-directional carbon fiber fabric, saturated with NRI's proprietary epoxy system, Titan™-Saturant Epoxy. The Titan-Saturant Epoxy system is a two-part, 100% solid epoxy system designed for use in a wide variety of environments possessing excellent chemical resistance and high temperature ratings. The development of this system was designed to conform to ACI440 standards for nonmetallic composite reinforcing solution of concrete.



### TITAN™-SATURANT EPOXY

#### Two-Part Epoxy for Structural Repair System

The Titan™-Saturant Epoxy is a two-part, 100% solid epoxy system designed for composite laminate repair in conjunction with our infrastructure repair system, Titan™. The Titan line of products are custom engineered composite systems which utilize high strength repair laminates in combination with NRI's proprietary resin formulation. This unique composite system is used to repair and reinforce concrete structures without expensive and time-consuming rebuilding cost. The development of this system was designed to conform to ACI440 standards for nonmetallic composite reinforcing solution of concrete.



### THE RESINATOR™

#### Field Saturation Machine

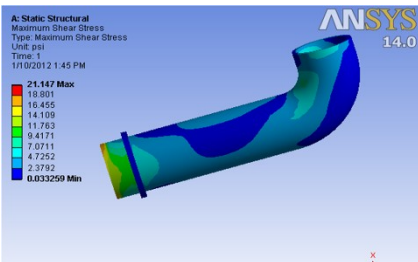
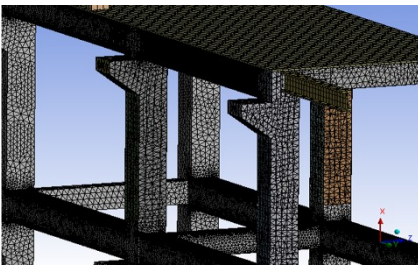
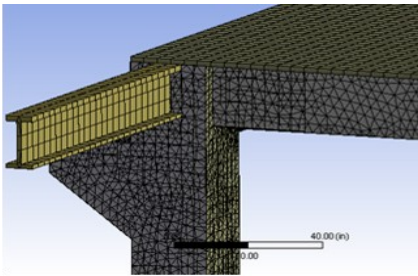
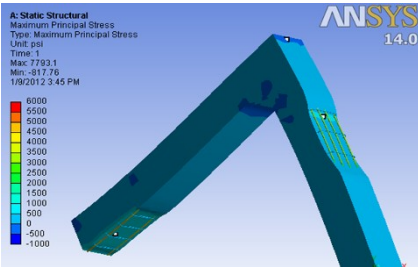
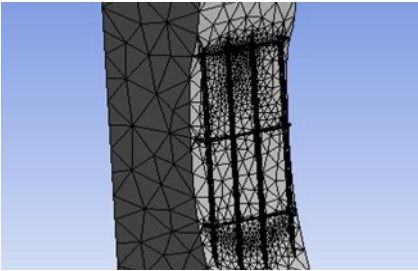
The Resinator™ is a patent-pending, custom-engineered, saturation machine designed for use with NRI's Titan™ line of products. It has proven to be a highly valuable tool that saves time and money, especially on large projects, allowing the technicians to saturate at a much faster rate than the traditional hand saturation techniques. It controls the resin to cloth ratio to provide accurate application. The Resinator is available in two sizes to accommodate a variety of widths up to 12", so that you can work even faster on small or large structures.

©Neptune Research Inc. (NRI) NRI® is a registered trademark, while Titan™-218, Titan™-118, Titan™-Saturant Epoxy, Titan™-Filler, Titan™-FillerCR, Titan™-Top Coat and The Resinator™ (patent pending) are trademarks of NRI. NRI utilizes a process of continuous product improvement for all of our products. While we do strictly adhere to our products' specifications, we routinely implement product improvements. Therefore, please contact your local NRI distributor or office for the most current product specifications. NRI warrants the quality of this product when used according to directions. User shall determine suitability of product for use and assumes all risk. The seller will not accept liability for more than product replacement. TT LC 0214



# CIVIL

## HIGHLIGHTED PRODUCTS & SERVICES



### History

For over 30 years, NRI has focused its strategic research initiatives on the development, manufacturing and marketing of state-of-the-art composite repair solutions that withstand the tests of time, water and other elements. As the original inventors of the water activated, pre-preg composite material, NRI caught the attention of the US Navy and in 1996 secured its first contract with the US government requiring NRI's Syntho-Glass® to be standard onboard all Navy vessels. NRI's success with the US Navy led to the creation of larger and more robust materials. This expansion of its product capabilities allowed for the exploration of infrastructure repair opportunities in the refinery, chemical, power, municipal and commercial industries.

### Titan™ Product Line

Titan™ represents a line of custom engineered composite repair systems designed specifically for use on concrete and steel structures. Titan utilizes high strength epoxy, urethane and vinyl ester resins in conjunction with carbon and glass fibers to create unmatched strength, durability and chemical resistance.

### Titan System Components

- Titan™-Filler: structural epoxy gel
- Titan™-Filler CR: chemically resistant structural epoxy gel
- Titan™-Top Coat: aesthetically pleasing epoxy coating
- Titan™-Top Coat CR: aesthetically pleasing, chemically resistant epoxy coating

### Applications

- Repair of Corroded or Damaged Columns, Beams and Slabs
- Seismic Retrofit of Structural Elements
- Strengthening for Added Loading and / or Change of Use
- Repair of an Existing or New Construction / Design Defects

### Engineering Services

NRI offers engineers' technical support through all phases of a project. Our services to owner / operators and engineering professional include:

- Providing specifications, drawings and installation plans
- Onsite quality control
- Structural inspection analysis
- Regulatory compliant design proposals
- No cost assessment of potential applications

### Additional Design and Assessment Services

- Design Assessment
- Linear Buckling
- Harmonic Response
- Modal Response

### Mechanical Testing

- Tensile, compressive, lap shear, pull off, hoop stress
- Hydro-Static Pressure Testing
- Multi-Channel Data Acquisition

