

The Strongest Name in Carbon Fiber



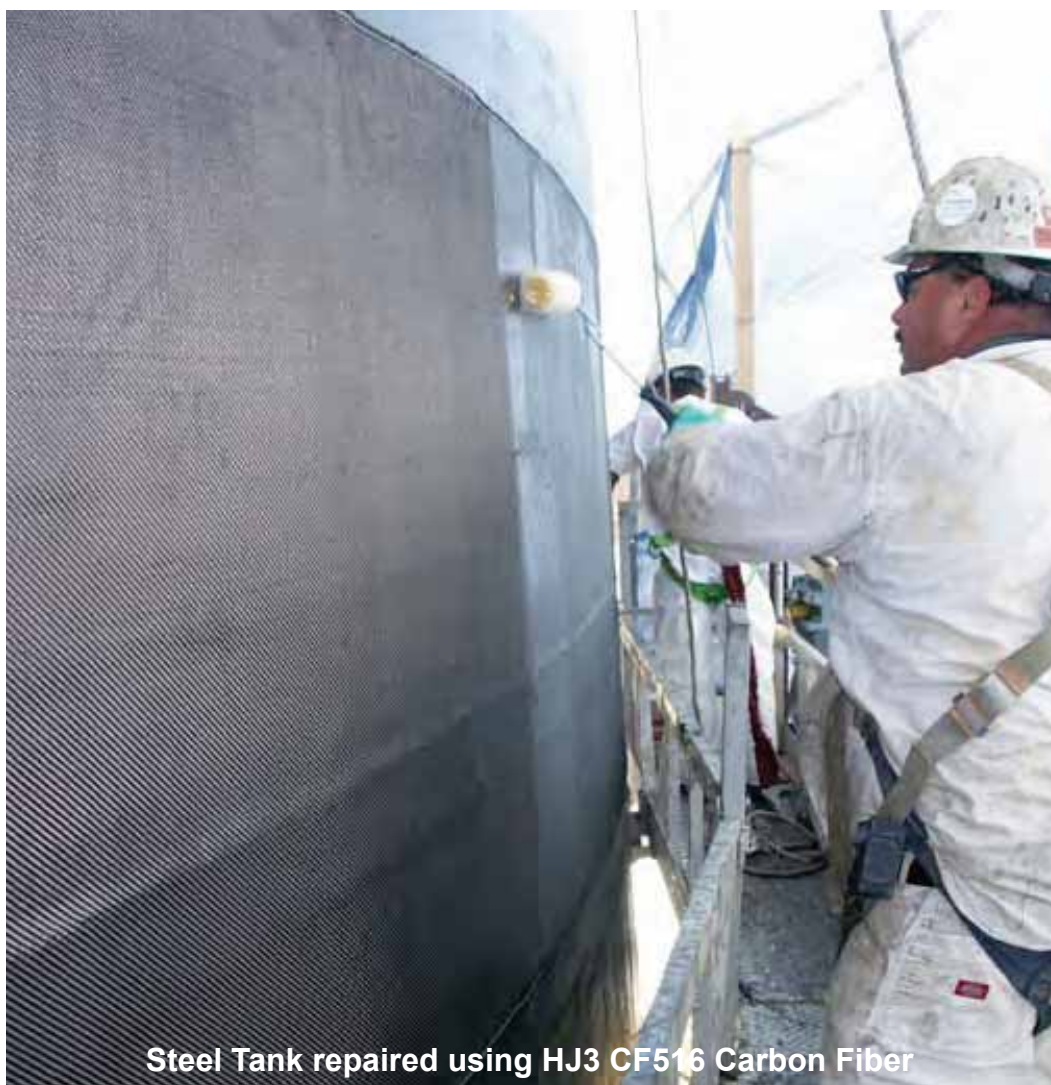
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GENERAL REPAIR

**CONCRETE, STEEL
& MASONRY**

Advantages

- 5 to 10 times stronger than steel
- Weighs 4 ounces per square foot
- Corrosion Resistant
- Chemical Resistant to Acidic & Alkali Environments
- Minimizes Downtime
- 30% to 40% Cost Savings over alternative repairs or replacement!



Steel Tank repaired using HJ3 CF516 Carbon Fiber



COLUMNS

In addition to steel tanks, **HJ3 Composite Systems™** can be wrapped around the perimeter of a damaged concrete column to return the column to its original strength. The carbon or glass fabric can also be wrapped around the column to allow the column to resist seismic or blast forces.

HOW IT WORKS

HJ3 Composite Systems™ provide exceptional tensile strength that can be used to confine columns allowing the column to resist flexural and shear forces that would normally cause the column to crack or fail. The HJ3 material holds the column together and protects the column from further corrosion.



WALLS & PARAPETS

HJ3 Composite Systems™ can be used to strengthen existing concrete and masonry walls that lack the necessary flexural strength, shear strength and ductility to withstand seismic forces caused by an earthquake. The materials can also be used to repair walls weakened by the corrosion of existing steel reinforcement.

HOW IT WORKS

HJ3 Composite Systems™ offers 150,000 psi tensile strength in a package that is 1/16th-inch thick and weighs less than 4 ounces per square foot. When bonded to the surface of the wall, the material resists flexural and shear forces caused by earthquakes, wind loads, or the movement of the building. For masonry walls, the material panelizes the masonry blocks causing a weak and brittle substrate to be strong and ductile.



BEAMS & SLABS

HJ3 Composite Systems™ can be used to strengthen existing concrete beams and slabs as well as steel beams. Once saturated the carbon fabric or pre-cured carbon laminates are bonded to the concrete or steel substrate. **HJ3 Composite Systems™** replace the use of steel strengthening systems that require bolting or welding creating significant cost savings and safety benefits.

HOW IT WORKS

HJ3 Composite Systems™ are designed to provide external tensile strengthening to resist flexural loads placed on the beam or slab. As the loads cause the beam or slab to deflect, the fibers in the **HJ3 Composite Systems™** tension to resist those loads and strain to minimize deflection.