Applied Like Wallpaper

Three Times Stronger Than Steel in 24 Hours

QuakeWrap®
Stronger Than Steel™

Pipes

Underwater Piles

Beams and Slabs

Introduced in the 1980s by QuakeWrap President, Professor Mo Ehsani, Carbon Fiber Reinforced Polymer (CFRP) is a structural reinforcing material that is applied like wallpaper, reaching 2 to 3 times the strength of steel in 24 hours.

Advantages:

- High tensile strength
- Lightweight
- Conforms to all shapes
- Full cure in 24 hours
- Ease of installation
- Non-toxic
- No odor
- Waterproof

Applications:

- Concrete
- Masonry
- Steel
- Wood
- Underwater Piles
- Blast Protection

Can Strengthen:

- Beams
- Columns
- Tanks
- Silos
- Slabs
- Walls
- Pipes
- Piles

Turnkey Solutions:

- Design
- Materials
- Installation

Tanks and Silos

Bridges

Corrosive Environments

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Tucson, AZ 85719
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www.QuakeWrap.com

WINNER OF EXCELLENCE AWARDS

INTERNATIONAL CONCRETE REPAIR INSTITUTE — ICRI

STRUCTURAL ENGINEERS ASSOCIATION ARIZONA — SEA

NSF Certified

CALL NOW FOR AN EVALUATION BY ONE OF OUR SENIOR STRUCTURAL ENGINEERS

QuakeWrap Times

www.quakewrap.com www.superlaminate.com www.pilemedic.com www.pipemedic.com

SuperLaminate™ - Not Your Ordinary Fiber Wrap System

Introducing the Next Generation of FRP

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Twenty years ago, QuakeWrap President, Professor Mo Ehsani introduced a radical idea to the construction industry; strengthening of structures by epoxy bonding of FRP products. In the following years, he received the first U.S. National Science Foundation grants to study Seismic Behavior of Columns and Masonry Walls retrofitted with FRP. These pioneering efforts laid the foundation for a technique world-wide accepted for repair and retrofit of structures.

Today we lead this industry again by introducing SuperLaminate™, the next generation of FRP products. SuperLaminate™ is a pre-cured FRP sheet manufactured in our ISO-9000 certified plant offering endless combinations of strength and stiffness in different directions. The thin semi-flexible sheets are supplied in 300 feet (90 m) long rolls that can be as wide as 50 inches (1270 mm) and offer major cost-savings for many construction projects. A single roll can be used to construct a cylindrical shell from 3 in. (75 mm) to 100 ft. (30 m) in diameter.

Advantages of SuperLaminate™:

- One size fits all
- Stronger than fiber wrap
- ISO-9000 certified plant
- Up to 80% faster construction time
- Material properties known before installation

To learn more about the many uses and advantages of these new innovative products please visit the following websites:

www.SuperLaminate.com
www.PipeMedic.com
www.PileMedic.com

Pre-cured SuperLaminate™ is manufactured to meet design strength and stiffness requirements. A single roll fits many structures of different sizes.

Blast retrofit of structures

Repair of columns below grade without the need for costly excavation (www.PileMedic.com)

Trenchless repair of pipes and culverts, including spot repair (www.PipeMedic.com)

Strengthening of concrete & masonry walls

Retrofit of beams, slabs and columns

Field-manufactured cylindrical shell around square columns

Repair of underwater piles without the need for costly divers (www.PileMedic.com)

Underwater Piles

The patent-pending PileMedic™ system is more than 10 times stronger than other pile encapsulating jackets on the market.

- Starting at or above water line, wrap the laminate onto itself and apply underwater epoxy on overlapped regions to create a solid shell that is loosely fitting around the pile.
- Lower the jacket into water and continue wrapping until desired length of pile is encapsulated
- Seal the top and bottom of shell
- Fill annular space with resin and pressurize
- Confinement will increase pile capacity

Attach spacers to damaged Pile

Apply epoxy to PileMedic™ and overlap to create a continuous seamless shell

Allow underwater epoxy to cure. Inject grout or resin & remove spacers

Seal top of shell & pressurize (if required)

CALL NOW
(520)791-7000

FOR AN EVALUATION BY ONE OF OUR SENIOR STRUCTURAL ENGINEERS

Utility Poles

- Wrap SuperLaminate™ around pole and apply epoxy on overlapping portions to create a solid shell
- Using our patent-pending robot, flush out a ½ inch wide X 6-ft deep band of soil around pole
- Lower the shell into ground
- Fill the annular space with resin
- Pressurize the resin to force it into deteriorated pole

Corrugated Metal Pipe

- PipeMedic™ can be bonded to the high points of corrugation
- If damaged, the invert portion of the culvert can be filled with concrete

Advantages:

- No loss of diameter
- No grouting required
- One flat sheet fits any diameter pipe

Columns

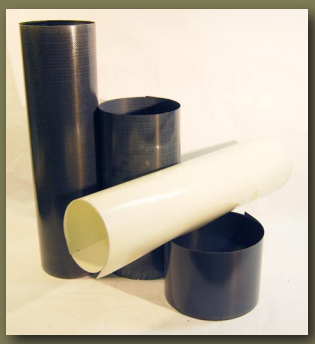
- Apply a thin layer of epoxy putty to SuperLaminate™ and wrap around the column to create a seamless structural shell
- Fill the annular space with concrete, grout, or resin.
- The confining effect of the shell increases the grout or concrete strength significantly.

The Future in Pipe Renovation™

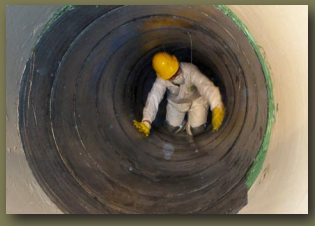
Reduce your Pipe Repair Time By 80%

PipeMedic+™ By QuakeWrap, Inc.

PipeMedic™ Pre-Cured SuperLaminate™



Manned-Entry Repair



The patent-pending PipeMedic™ system developed by Professor Mo Ehsani offers significant advantages over the conventional wet lay-up technique that has been used for over a decade to repair and strengthen pipes.

PipeMedic™ is a pre-cured sheet of laminated carbon FRP with tensile strength about 4 times that of steel. The sheets are up to 4 ft. wide x 300 ft. long and are coiled for transportation. Inside the pipe (or tank), the coil is released and PipeMedic™ snaps against the surface of the pipe like a loaded spring!

Bonding is achieved by applying a thin coat of epoxy to the back side of PipeMedic™.

Advantages:

- Continuous or spot repair
- One size fits all pipes 3-inch in diameter or larger
- Repair pipes without traffic disruptions
- Can be cut in the field to any width or length for easier handling
- Virtually no loss in diameter
- No annular space to grout
- Maintenance free

Unmanned-Entry Repair for 3" and Larger Pipes

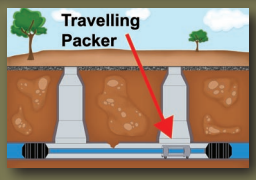
Apply epoxy to PipeMedic™ & wrap around packer …

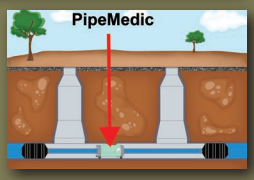
Lower PipeMedic™ assembly into pipe...

Guide to repair position w/ CCTV camera; inflate packer…

Allow epoxy to set; deflate & remove packer.

Eliminate Street-Level Bypass & Traffic Disruption





Sample Properties of PipeMedic™

Measurements per ASTM D303-09	PC40.2	PC26.16	PG16.15
Longitudinal Direction			
Tensile Strength (psi)	156,000	101,000	62,000
Modulus of Elasticity (ksi)	13,800	7,150	3,500
Transverse Direction			
Tensile Strength (psi)	9,300	64,000	60,000
Modulus of Elasticity (ksi)	1,190	2,940	3,650

PipeMedic™

(520) 829-0046 OR (888) 830-PIPE [7473]
www.PipeMedic.com

Visit our other unique products at:
www.SuperLaminate.com
www.PileMedic.com