

# WeldWrap™



## The ***ONLY*** Composite Repair Sleeve Designed for Girth Weld Zone Reinforcement

- *“Smart Pig” Detectable • Diamond Lock Technology*
- *No Shutdown • No Hot Work • No Heavy Equipment*
- *D.O.T. Compliant • 45 Minute Installation*
- *2-Man Operation*



**WrapMaster, Inc.**

*“Composite Solutions for Piping and Structures”*

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# AN ADVANCEMENT IN PIPE REPAIR

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The **only** single unit repair system for the structural reinforcement of defects associated with Girth Weld areas



## WeldWrap™ Kit:

- ◆ **WeldWrap Composite Sleeve -Patent Pending-** uses PermaWrap superior laminate construction with proven materials to form a high tensile strength rigid “magnetically detectable” fiberglass wrap for the PERMANENT structural reinforcement of “blunt” type external defects near welds with up to 50% wall loss.
- ◆ Two-part proprietary Adhesive System used to bond the PermaWrap Sleeve to the pipe surface and to composite layers to form a monolithic structure.
- ◆ Two-part proprietary high compressive strength Putty used to fill all cavities and tented areas to ensure a “load-transfer” path from the pipe surface to the PermaWrap Sleeve.
- ◆ Installation Accessory Kit provides all items to properly apply the PermaWrap System with minimal additional tooling.
- ◆ The WeldWrap™ System Repairs 4” thru 56” Diameter Piping.
- ◆ The WeldWrap™ Kit is (available ONLY in 12” Widths x 10 Layers) must extend a minimum of 1-1/2” beyond the edges of the defect.

## Repair:

- ◆ Corrosion Defects
- ◆ Blunt Dents and Gouges
- ◆ Girth Weld Zone Repairs
- ◆ Vertical & Horizontal Piping

## Testing:

- ◆ Cyclic Fatigue > 100 psi to 2200 psi (72% SMYS)
- ◆ Hydrostatic Burst > Bare Pipe & Reinforced
- ◆ Adhesive Bond Testing
- ◆ Tensile Strength Evaluations
- ◆ Compressive Strength Evaluations

## Material Properties:

Cure Time	2 Hours
Max Operating Temperature	130 °F
Chemical Resistance (pH range)	4-11
Tensile Strength (psi)	90 ksi
Tensile Modulus (psi)	5.5 msi
Flexural Strength (psi)	26 ksi
Flexural Modulus (psi)	2msi
% Elongation @ 77 °F - Composite	1%
% Elongation @ 77 °F - Adhesive	40%
% Elongation @ 77 °F - Putty	<1%
Lap Shear Strength @ 140 °F - Adhesive (psi)	1.6 ksi
Compressive Strength @ 140 °F - Putty (psi)	10 ksi
Hardness - Shore D	78
Coefficient of Thermal Expansion (in/in/°F)	6.70E+06