



MIDWEST PIPE REPAIR™

PROFESSIONAL INTEGRATED MECHANICAL SERVICES

SleevePro

HydroPro, Inc.



MIDWEST PIPE REPAIR

ST. LOUIS, MISSOURI

SERVICE PROVIDED

24/7/365

TOLL FREE

1 - 877 - 677 - 6771

WEB SITE

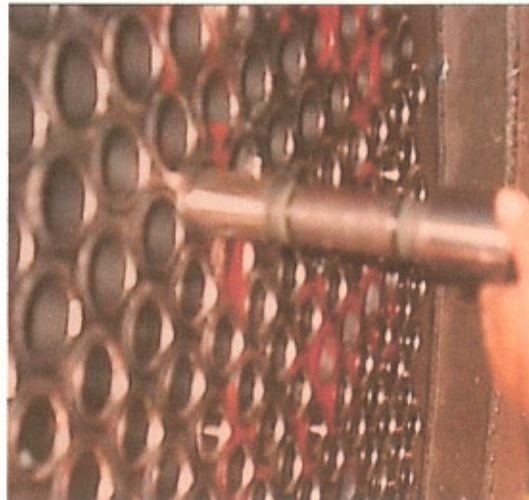
www.MPR1.com

Midwest Pipe Repair is pleased to introduce ...

SleevePro Strain Control Slewing

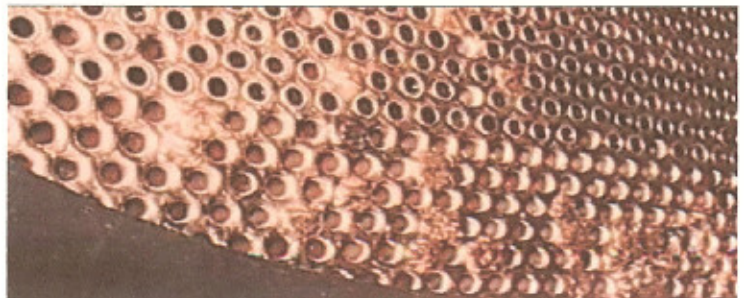
As heat exchangers and condensers age, their tubes can begin to fail for any number of reasons including erosion, corrosion and stress induced corrosion cracking.

Complete tube replacement is expensive, time consuming, and often unnecessary since historically most failures occur within the first few feet of tube inlets



For many years, metal sleeves inserts have been inserted into failing tubes as a means of restoring (re-lining) the failed section of tube and prolonging the life of the exchanger. But, mechanical rolling and pinning have produced mixed results, with many inserts falling out during service.

With the SleevePro Strain Control method, however, inserts are expanded uniformly, producing a consistently tight fit with less heat transfer loss.



So, how does it work? Please read on



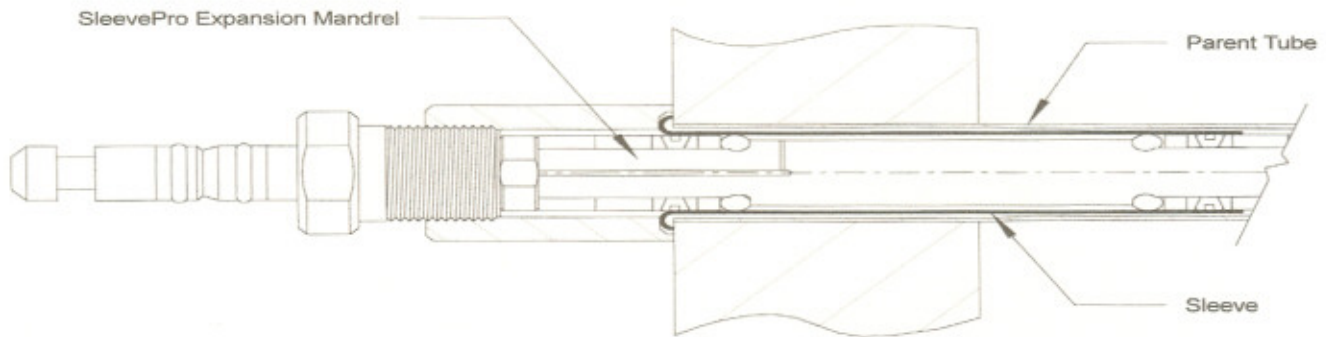
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Strain Control Sleeving

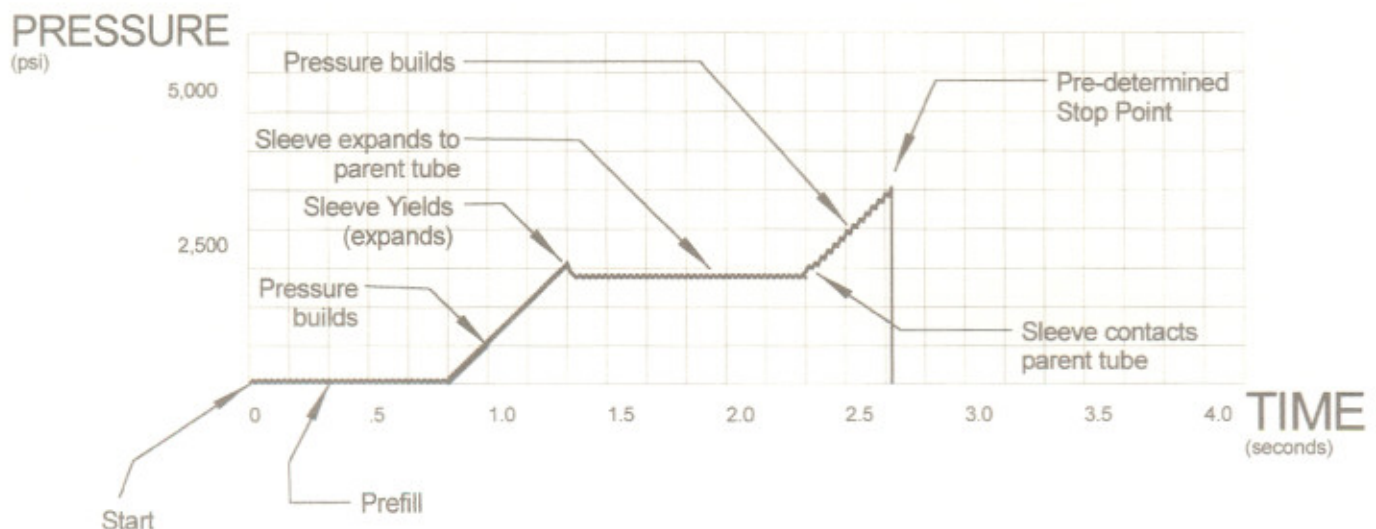
Hydraulic tube expansion innovations from Midwest Pipe Repair

The SleevePro® Strain Control process is a proven, economical method of extending the service life of aging or failing heat exchangers and condensers. When a sleeve or ferrule is hydraulically expanded into a failing parent tube (using the SleevePro® method) the resulting residual interfacial pressure produces a tight fit while minimizing heat transfer loss.



SleevePro® expansion mandrel and sleeve prior to expansion

The SleevePro® system by MPR utilizes strain gauge technology which allows the system to electronically sense the points at which the sleeving material yields and makes contact with the parent tube.

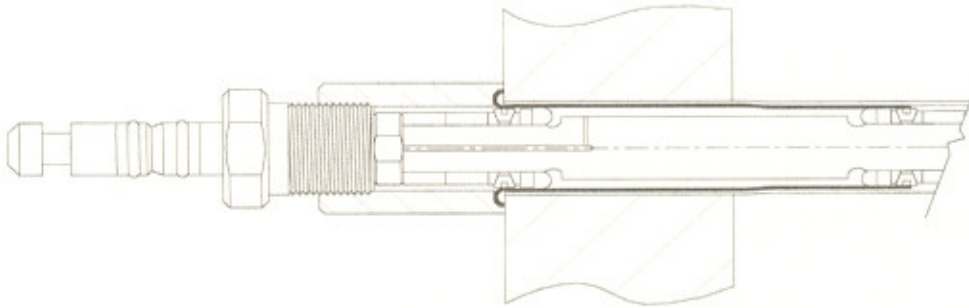




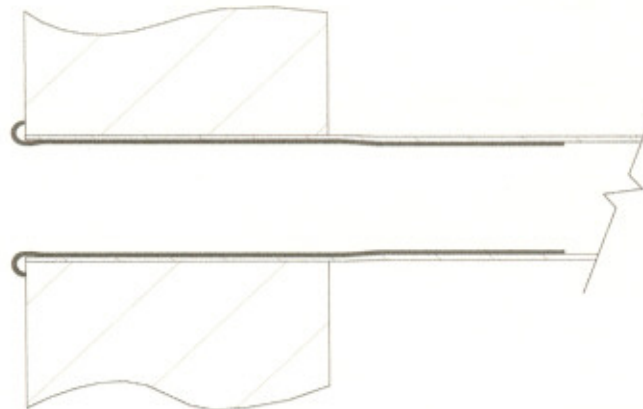
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Once the sleeve comes into contact with the parent tube, the SleevePro® system controls additional water volume to limit the radial expansion of the sleeve and parent tube, thus creating a tight interfacial fit by utilizing the elastic capacity of the parent tube.



After strain controlled expansion



Completed SleevePro® strain controlled installation

To learn more about how you can extend the life of your heat exchangers and condensers, call

MIDWEST PIPE REPAIR™

Telephone – Toll Free 1 - 877 - 677 - 6771 FAX: (314) 846 - 8238

or email us at: info@mpr1.com



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Hydraulic Expansion is the direct application of high internal hydraulic pressure within a tube in order to form a joint between a tube and tubesheet or parent tube. *MPR's equipment* provides an expansive force in an accurately set, highly repeatable, and controlled manner.

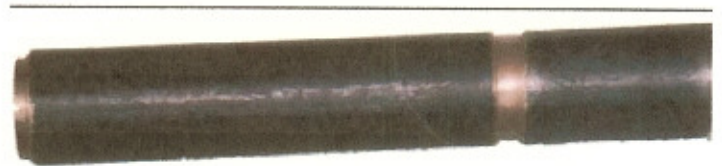
SLEEVEPRO



The SleevePro® system tracks the stress/strain curve of the sleeve which allows the system to electronically sense the points at which the sleeving material yields and makes contact with the parent tube.

Once the sleeve comes into contact with the parent tube, the SleevePro® system controls additional water volume to limit the radial expansion of the sleeve and parent tube, thus creating a tight interfacial fit by utilizing the elastic capacity of the parent tube.

The SleevePro® offers a proven, economical method of extending the service life of aging or failing heat exchangers, condensers, and feedwater heaters. When a sleeve, ferrule or full-length liner is hydraulically expanded into a failing parent tube the resulting residual interfacial pressure produces a tight fit while minimizing heat transfer loss.



For more information contact us toll free at 1 - 877 - 677 - 6771 or send an email inquiry to info@mpr1.com



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HYDRAULIC SLEEVE EXPANSION DATA SHEET

DATE	CONTACT	PHONE
HYDRAULIC EXPANSION END USER		

SCOPE OF APPLICATION AND SPECIFICATIONS

NEW OR RETUBE	NUMBER OF EXPANSIONS	APPROXIMATE START DATE
TYPE OF UNIT:		
<input type="radio"/> Heat Exchanger	<input type="radio"/> Boiler	
<input type="radio"/> Condenser	<input type="radio"/> Other (Describe):	
<input type="radio"/> Feedwater Heater		

PARENT TUBES

MATERIAL	MIN. YIELD	MIN. TENSILE
O.D.	WALL THICKNESS/GAGE	WALL (CIRCLE ONE): <i>Avg. / Min. / Nominal</i>
ACTUAL TUBE I.D. MEASUREMENT	TYPE: <i>Seamless / Welded</i>	
U-BEND OR STRAIGHT	OVERALL LENGTH OF TUBE	
SETTING OF TUBE TO TUBESHEET PRIMARY FACE: <i>(Recessed / Flush / Protruding, etc.)</i>		
PITCH	HOLE PATTERN	
ARE THE TUBES WELDED TO THE TUBESHEET:	<i>Yes / No</i>	<i>Seal / Strength</i>

TUBESHEET

TOTAL THICKNESS	MATERIAL	MIN. YIELD	MIN. TENSILE
CLAD: <i>Yes / No</i>	THICKNESS	MATERIAL	
SHELL ATTACHED: <i>Yes / No</i>	PARTITION PLATE: <i>Yes / No</i>		
IF "YES" TO EITHER OF THE ABOVE: SHORTEST DISTANCE BETWEEN HOLE CENTER LINE AND SHELL/PLATE			

SLEEVE

LENGTH	MAT'L	TYPE <i>(Seamless, Welded Drawn, etc.)</i>
OVERALL LENGTH	WALL THICKNESS/GAGE	
INLET SHAPE <i>(Straight, Rolled, Flared, etc.)</i>	OUTLET DESIGN <i>(Straight, Chamfered, etc.)</i>	

SPECIFICATIONS (IF APPLICABLE)

Please provide any available drawings, sketches, or blueprints, as well as performance requirements regarding working and test pressure of the vessel.
 Drawings Supplied: *Yes / No*

Signature: _____ Date: _____

After you have filled out the data sheet please fax back to our office: 314-846-8238