



cured-in-place pipe trenchless pipe rehabilitation

MPC ToughTube® cured-in-place pipe lives up to its name.



For municipalities and industries looking for a quick, cost effective and non-destructive way to rehabilitate deteriorating pipelines without the need for excavation, MPC ToughTube® is the solution.

CIPP lining systems are the most widely used and accepted process for restoring structural integrity, reducing inflow and infiltration, and in many circumstances increasing flow capacity in larger diameter lines. The pliable nature of the uncured pipe liner, or tube, which is made of a resinsaturated felt with a vapor barrier, allows the material to be installed around curves and other obstructions while filling cracks and bridging gaps.

The lining process is accomplished by either inverting or pulling the tube into the existing host pipe made of any material. Once the resin-impregnated tube has been fully installed, it is cured using circulating hot water or steam. During the curing process, the tube is held tightly against the host pipe by internal pressure. After the tube has cured into a monolithic structure, the laterals are robotically reopened.

Our professional installers work quickly, typically completing jobs in just days rather than weeks or even months.



MPC ToughTube® can be designed to restore the full structural strength of the host pipe or it can be designed strictly as a liner depending on the degree of host pipe deterioration. It is available in a wide variety of shapes and pipe diameters from 6 inches to over 96 inches.

Install high strength MPC Toughtube fast, with minimal or no excavation.

A Safe, Smart Choice

- Restores full-strength to original pipeline
- Most widely used lining technology
- Environmentally safe
- MPC ToughTube is manufactured to the highest quality standards
- Stops water infiltration and exfiltration, root intrusion and soil loss
- Smooth pipe finish improves flow characteristics
- Pliable nature fills in cracks and bridges gaps
- Wide variety of shapes and diameters from 6 inches to 96 inches

Save Money

- The cost of installing MPC Toughtube is much less than total replacement by conventional trenching techniques
- Installation is fast using existing manholes
- Less pipe maintenance

Reduce Public Inconvenience

 Drastically reduces the public inconvenience and disturbance to the environment caused by traditional repairs



Why choose Miller Pipeline

Miles of Experience

- More than 50 years of contracting experience
- Over 25 years of trenchless rehabilitation experience
- Wide geographic footprint enables us to ensure the availability of local resources and expertise to support your project
- Well-trained, experienced team of installers
- Ability to perform a turnkey project

We Do the Job Right

- Miller Pipeline can assist the engineer or the owner designing the project by recommending the best rehabilitation methods and materials
- Everyday commitment to provide outstanding customer service and exceed customer expectations

Installation

Step 1: TV inspection and pipe cleaning

The existing pipe is first cleaned and televised.

Protruding service connections are removed; partially collapsed sections are then repaired and all debris in the pipe is removed and disposed of properly.

A detailed video of the pipe's condition is produced.



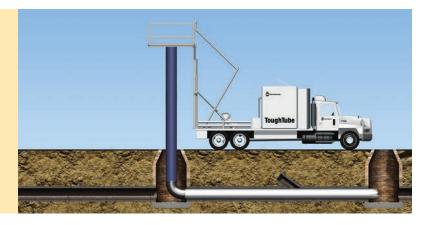
Step 2: Installation in the host pipe

MPC ToughTube® is typically inserted into a pipeline at the manhole. Runs of tube can then be installed from manhole to manhole, even passing through intermittent manholes or structures depending on site conditions. The result is that no excavation is required and the installation is fast and economical.



Step 3: Expansion and shaping

Once in place, the tube is heated to activate the thermosetting resins, resulting in a new structural pipe inside the original host pipe.



Step 4: Service connection reinstatement

After the new pipe has cured, lateral lines are re-instated using a remote-controlled robotic cutter. Lateral connections can be grouted or robotically sealed if required.



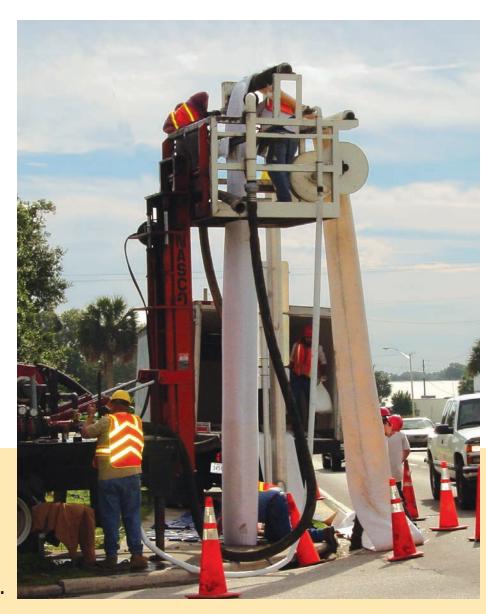


MPC Toughtube[®] is manufactured to the highest quality standards you expect from Miller Pipeline.

Quality is assured by first selecting the proper felt-tube material to the calibrated wet-out, ensuring proper disbursement of the selected resins, continuing on with batch testing, proper transportation and product handling, and finally the actual installation and reinstatement of the services. Quality is what Miller Pipeline customers have grown to expect for over 50 years from all of our products and services.

We have assembled an extremely qualified and knowledgeable team that is capable of handling all aspects of this product, as well as field construction management. The "Team Oriented, Quality Driven" Miller Pipeline culture is a key ingredient to our success and we take our commitment to customer service and customer satisfaction very seriously.

MPC ToughTube® is a pipeline reconstruction system which consists of a non-woven, needled polyester felt saturated with a thermosetting resin and inverted or pulled into an existing pipeline and then cured.



Different resin selections are available including polyesters, vinyl esters and epoxies. All selections are formulated by the most experienced manufacturers in the world to ensure the highest quality product available. Our felt tube suppliers have hundreds of thousands of lineal feet of manufacturing experience, and they have developed many of the

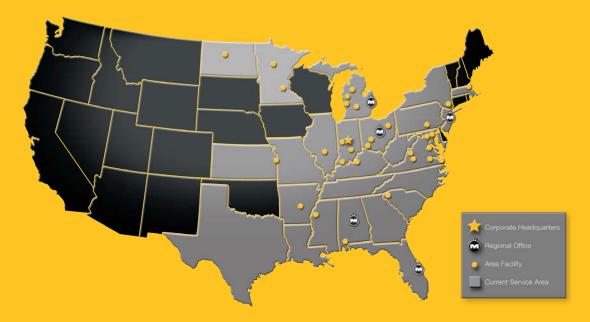
processing techniques used in the industry today.

The finished product molds to the host pipe and the tube becomes a monolithic seamless pipe. Once cured, MPC ToughTube® restores structural integrity, eliminates joints, and stops root intrusion. Flow in the line often

increases due to the smooth wall of the liner. Compared to typical excavation methods, the trenchless installation of MPC ToughTube® does away with piles of excavated dirt, traffic congestion and public disruption.



Miller Pipeline is one of the nation's premier natural gas distribution, transmission pipeline and utility contractors. We provide a comprehensive range of pipeline contracting and rehabilitation services for natural gas, liquids, water and wastewater pipelines. Specialty products and services for the industrial and telecommunication industries are also offered. With our corporate headquarters in Indianapolis, Indiana, and area facilities throughout the country, our steadily expanding geographic footprint enables us to ensure the availability of local resources and expertise to support your project.



Our representatives will be glad to discuss your pipeline needs. For further information, or to arrange an on-site inspection, please contact us.

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