

# INSITUMAIN<sup>®</sup> SYSTEM FOR WATER APPLICATIONS

*The cured-in-place pipe solution for distribution and transmission main rehabilitation*



**The InsituMain<sup>®</sup> system is ideal for the renewal of distribution and transmission water mains up to 96-inches in diameter.**

The InsituMain<sup>®</sup> system is a in cured-in-place pipe (CIPP) technology specifically engineered for drinking water pipelines. Building on 40 years of experience and over one million feet of trenchless pressure pipeline installations, Insituform developed the InsituMain<sup>®</sup> system, an innovative solution, for pressure pipe renewal which is engineered and manufactured to project specifications and can be designed as an interactive or independent solution to meet your water pipeline rehabilitation needs.

All of Insituform's manufacturing and installation processes are consistent with nationally recognized ISO standards and Insituform's own quality control program. As a vertically integrated company, we take responsibility for engineering, research and development, manufacturing, installation and service of your pipeline rehabilitation needs. Our systems are designed to produce consistency and high performance.

The InsituMain<sup>®</sup> system is installed inside an existing host pipe and eliminates the risk of disrupting or damaging nearby utilities or other underground infrastructure systems. The trenchless installation method reduces the social and environmental costs of pipeline renewal projects by minimizing the carbon footprint, site noise, traffic detours and safety concerns present with traditional dig and replace methods.

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Stronger. Safer. Infrastructure.®

 **Insituform**

# INSITUMAIN® SYSTEM FOR WATER APPLICATIONS

## The InsituMain® System Structure

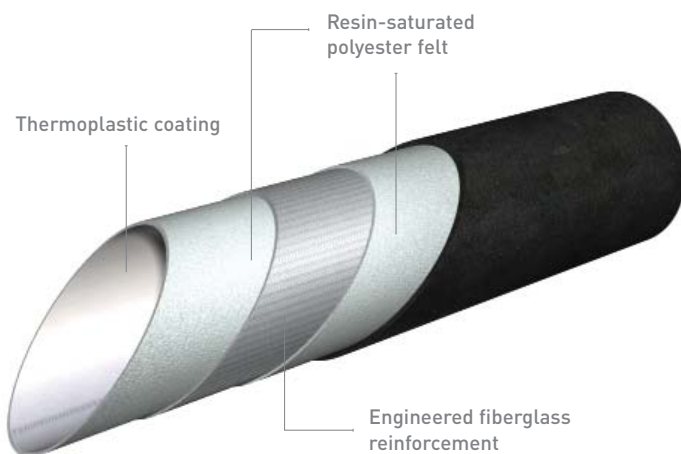
The InsituMain® system, for water applications, is a composite material of polyester fiber, fiberglass and a specially formulated epoxy resin system. A thin polypropylene layer on the inside surface increases the pipe's smoothness, reduces surface friction and provides an additional corrosion barrier for the pipe.

The InsituMain® system is designed to meet the Manual of Water Supply Practices M-28 issued by AWWA. The InsituMain® system meets the NSF/ANSI Standard 61.

The InsituMain® system can be used as a Class I non-structural liner, Class III semi-structural liner or Class IV fully-structural liner. The installation methods meet ASTM F1216 guidelines. The InsituMain® standard tube design, Class I, is a non-structural lining system to be used for non-pressure pipe applications, but required to meet the NSF/ANSI Standard 61. The InsituMain® system possesses a long-term internal pressure rating of up to 150 psi. With these design characteristics, the InsituMain® system can be considered equivalent to replacing the existing infrastructure with a new pipe without the disruption and costs of traditional dig and replace methods.

The InsituMain® system, depending on application, is capable of bridging over corrosion holes, pinholes and joint gaps in the host pipe on a long-term basis. As an interactive lining system, the InsituMain® system can be a cost-effective rehabilitation alternative when your host pipe is deemed structurally sound.

The InsituMain® system not only provides a structural renovation of the host pipe, it also offers the additional benefits of protecting the host pipe from internal corrosion, sediment build-up or further tuberculation. It often improves the hydraulic flow capacity compared with the existing host pipe.



## Design and Testing Standards

The InsituMain® system has been designed to meet the requirements of ASTM F1216. Upon installation, the InsituMain® system is pressure tested in accordance with these standards.

## Product Certifications

The InsituMain® system is certified to meet the NSF/ANSI Standard 61. Contact Insituform for additional information regarding certification.

## The InsituMain® System Installation



### Step 1:

If required, setup bypass and excavate pits to provide access to the existing water pipeline. Clean the pipeline and inspect using closed circuit TV (CCTV).



### Step 2:

Using the iTAP® robotic system, plug the individual service connections to prevent resin migration during cure.



### Step 3:

Install the InsituMain® system liner into the host pipe using water pressure. After curing with hot water, the pipe is cooled and the ends are cut.



### Step 4:

Following hydrostatic pressure testing, the iTAP® robotic system is used to reinstate service connections. Post-installation CCTV inspections are also completed.



### Step 5:

Disinfect the new water pipeline. Reconnect lined sections to the existing system using standard pipe fittings. Finally, restore excavation pits and remove temporary bypass.

## Service Connection Reinstatement

Service connections on the existing host pipe can be reinstated robotically from within the rehabilitated main. Using Insituform's innovative iTAP® robotic technology, plugged services are located and carefully drilled out at each service opening.



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