

TYFO[®] SYSTEMS

Pipeline rehabilitation and strengthening for pressure pipes



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Pipe Strengthening for Pressure Pipelines

Water transmission pipes or force mains can be strengthened by wrapping either the outside of the pipe or the inside (≥ 30 -inch diameter). The design is typically governed by the internal and/or external loads. Tyfo® systems provide joint and transition zone waterproofing and protect exposed concrete from abrasion decay and corrosion damage. New pipe segments damaged in the field prior to installation can be repaired using our system, which is much faster than conventional solutions. Types of pipes we can protect include:

- PCCP
- Steel
- Concrete
- Ductile iron
- Iron
- Cast iron
- Brick
- VCT
- Fiberglass

Rehabilitation and Protection from Corrosion

Aggressive environments can lead to corrosion of reinforcing steel and loss of strength. Tyfo® systems are designed to supplement the lost reinforcing steel in order to regain the original strength of the element and, in some cases, provide additional capacity. The unsound concrete must be removed and the exposed area should be treated with Tyfo® CIS (corrosion inhibitor system). After an abrasive cleaning, the area is then repaired using Tyfo® CB, Tyfo® P or Tyfo® PF materials. In some cases, there may be the need for pressure injection of existing cracks using the Tyfo® 103 or Tyfo® 111 epoxy.

After the area is properly repaired, the project-specific Tyfo® system can then be installed to provide the required strengthening and protection.

Certifications and Testing Agencies

- AWWA design standards
- ANSI/NSF 61 certification
- ICC Approved Materials (ICC-ES ESR-2103)



Tyfo® Technical Envelope

The Tyfo® Technical Envelope	
Diameter range	30 inches and above
Effluent temperature	up to 150° F
Pressure	up to 410 psi
Soil depths	≤ 35 feet
Pipe condition	Fully* or partially deteriorated
Bends	Yes
Offset joints	Yes

* Requires a completely smooth surface to apply FRP



An Aegion Company

Insituform Technologies, LLC
17988 Edison Avenue
St. Louis, MO 63005
800.234.2992
www.insituform.com