



SAK's CIPP Expertise Offers You a Trenchless Approach to Renewal of Sewer Pipes and Water Distribution Systems

America's aging water, stormwater and sanitary sewer infrastructure is deteriorating badly. As these piping systems approach a critical point, it becomes essential to find the best solutions for renewing their functionality and dependability before actual failure occurs.

Over the past three decades, one key technology—**cured-in-place pipe or CIPP**—has proven to be a superior, less disruptive and more cost-effective alternative to the traditional “dig-and-replace” approach to fixing pipeline problems and averting the problems that occur when culverts collapse or sewers overflow.

SAK Construction installs CIPP to repair deteriorated or damaged sewer pipes and water distribution pipeline systems. SAK's CIPP products are *proven trenchless technologies* that can help you reduce problems associated with infiltration, leakage and deteriorating water, sanitary and storm sewer infrastructure.

CIPP EXPERIENCE YOU CAN TRUST

SAK Construction's key personnel have been working on CIPP projects since the technology was first developed. In fact, SAK personnel have installed millions of linear feet of cured-in-place pipe and managed the installation of tens of millions of linear feet of cured-in-place pipe. This means that SAK's team includes many of the most experienced, trusted and well-known CIPP experts in the underground construction industry.



SAK CIPP FOR SANITARY AND STORM SEWERS 6" TO 96" IN DIAMETER

SAK's unique CIPP process can be used to safely rehabilitate sanitary sewers, storm sewers and force mains. It provides a smooth, jointless “pipe-within-a-pipe” that can be utilized to renovate deteriorating underground pipes from 6 inches to 96 inches in diameter. Using proprietary installation techniques, SAK's CIPP process provides unparalleled speed, safety and efficiency with minimal disruption to the above-ground environment.

SAK CIPP WITH AQUA-PIPE® FOR RESOLVING BREAKS AND LEAKS IN WATER DISTRIBUTION SYSTEMS

Trenchless renovation of water distribution systems demands different CIPP materials as well as specialized installation expertise. To repair and renovate water distribution systems, SAK provides CIPP using Sanexen Environmental Services' Aqua-Pipe®. Through an agreement with Sanexen, SAK Construction is the exclusive licensee for installing Aqua-Pipe in 10 U.S. states—Alabama, Arizona, California, Florida, Georgia, Maryland, Missouri, Nevada, South Carolina and Texas--plus southern Illinois.

AQUA-PIPE'S PROVEN TECHNOLOGY

Aqua-Pipe is a stand-alone structural liner, designed and manufactured to be cured inside 6-inch to 12-inch water mains, eliminating the need to use the more costly and disruptive "dig-and-replace" method of pipeline rehabilitation. Aqua-Pipe differs from liners used in alternative types of cured-in-place pipe (CIPP) technology in that it was developed specifically for use in drinking water distribution systems, rather than in sewer and sanitary pipes. As a proven water-main rehabilitation trenchless technology, Aqua-Pipe is in great demand nationwide today.

Aqua-Pipe is a composite of a woven textile jacket with epoxy and an inside polymeric membrane for water tightness. This trenchless technology produces low emissions of carbon dioxide when compared to traditional construction methods.

A Class IV (AWWA M28 Manual) structural liner, Aqua-Pipe was first developed by Sanexen a decade ago and has been successfully installed in more than 1.2 million feet of water mains in North America. Aqua-Pipe meets all drinking water requirements and is certified by the National Sanitation Foundation to NSF/ANSI 61.



SAK CIPP: SEWER PIPELINE PROBLEMS SOLVED

- **Restores structural integrity and flow capabilities to host pipe and provides a minimum 50-year design life.** Our proven technology provides dependable, long-lasting solutions you can count on. Improved pipeline flow characteristics and capacity are often achieved with the smooth interior surface provided by SAK CIPP.
- **Minimizes surface disruption and community impact.** The CIPP process is significantly safer, faster and less disruptive of existing surface conditions—both residential and commercial—than open-cut repairs. CIPP minimizes the need for detours of vehicle and pedestrian traffic, which can significantly impact business revenues.
- **Reduces treatment and maintenance needs.** By minimizing wet weather infiltration, SAK CIPP reduces treatment and maintenance needs and extends the life of your underground structures. SAK CIPP provides sewers outstanding abrasion resistance and an excellent corrosion barrier against damaging sewer gases and chemicals.
- **Reduces infiltration and exfiltration.** SAK CIPP is jointless from manhole to manhole, reducing groundwater infiltration into the sewer main and leakage of sewage from inside the sewer main through pipe defects. CIPP also prevents roots from entering the sewer main at pipe joints and cracks.
- **Provides cost savings.** Addressing buried piping infrastructure problems with SAK CIPP typically costs less than digging up and replacing damaged pipe. Additionally, from a “total cost” perspective, SAK CIPP provides significant savings versus conventional repair methods.

SAK + AQUA-PIPE: WATER DISTRIBUTION SYSTEM RENEWAL

- **Adds life to drinking water distribution systems.** Aqua-Pipe’s proven technology provides an effective trenchless approach to resolving the breaks and leaks that plague aging water distribution systems. Aqua-Pipe benefits include increased pressure and flow capacity, corrosion resistance and regained structural capacity. Most maintenance needs are eliminated.
- **Can be seamlessly installed in less-accessible settings.** With Aqua-Pipe, SAK can line difficult-to-access pipelines (under bridges, highways, etc.) with minimal disruption to adjacent infrastructure.
- **Compared to traditional open-cut repair methods, installation is safer, faster and requires less excavation.** Aqua-Pipe is cured-in-place piping (CIPP) that is installed by the pulled-in-place piping method. Service connections are reinstated from within the pipe after the lining has been installed. SAK’s Aqua-Pipe installation minimizes annoying and costly surface disruptions, such as traffic detours, and the resulting community complaints.
- **Reduces costs.** Pipeline renewal using Aqua-Pipe is 20 to 40 percent less expensive than traditional pipe replacement methods. Aqua-Pipe also can save you money in the long run by preventing water-main breaks, reducing treatment and pumping costs, and minimizing the need for future intervention or maintenance.

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