

Cured In Place Pipe Lining – CIPP

UV-Cured and Inversion Technology

Features:

- Restoring Structural Pipeline Integrity
- Increased Flow Capacity
- Trenchless Technology-No Excavation
- Cost-Effective Technology
- Proven Application for Over 20 Years

Applications:

- Storm Water Pipelines
- Sewerage Pipelines
- Industrial Effluent Pipelines



Pipeline Rehabilitation

Within the APS, we are able to provide turnkey service to our customers in the utility, power, oil and gas industries. The choice of the most suitable pipeline rehabilitation system depends upon which performance parameters the pipe fails to meet and why the failures occur. Criteria like; condition of the existing pipeline, requirements for the desired performance, hydraulic capacity and structural design data, as well as financial considerations have to be taken into account. Since there is no single solution that covers each and every pipeline rehabilitation project, APS prides itself in providing a very broad range of pipeline rehabilitation methods from which we can offer a tailor-made solution fitting the specific circumstances of the project. Cured In Place Pipe Lining is one of these solutions.

Water entering wastewater systems through holes, breaks and joint failures can significantly impact treatment facilities. CIPP can significantly reduce this infiltration and eliminate leakage. In dry climates, tree and plant roots find the sewer system an attractive source of water and nutrients. Entering through pipe defects, roots create blockages and overflows. CIPP restores the flow within the pipe while keeping external water and roots out.

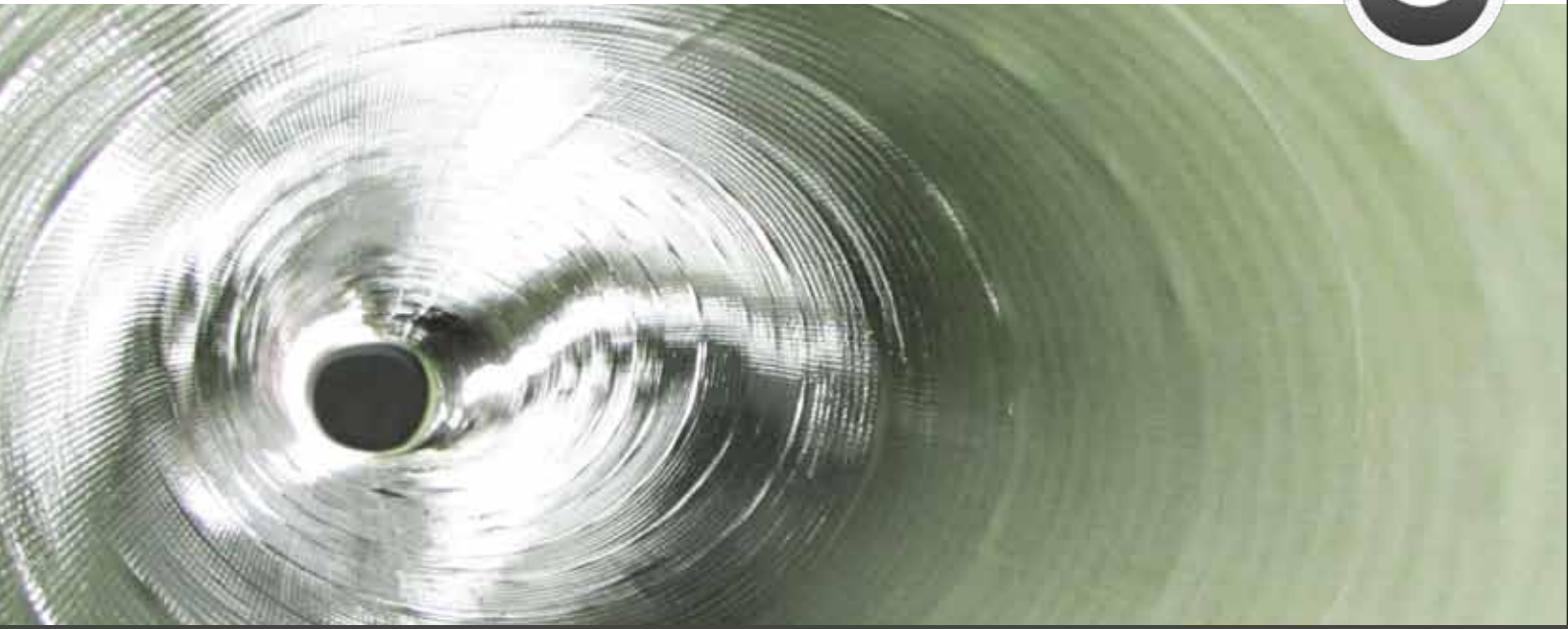
The APS CIPP installation technology can be used to rehabilitate wastewater pipelines & repair circular sanitary sewers, storm sewers and force mains. CIPP is a jointless pipe-within-a-pipe, with the capability to rehabilitate pipelines ranging in diameter from 150mm to 2500mm. CIPP can also negotiate most bends.

CIPP Technology

CIPP restores structural integrity to damaged sewer pipes. The design models used, independent test results and over 40 years of service all confirm that CIPP is a structural product with a 50-100 years design life.

CIPP provides the least cross-sectional reduction of all methods used to rehabilitate smaller and medium diameter pipes. Despite the cross-sectional reduction, the smooth, joint-less interior of our product typically improves flow capacity. There are no joints that can separate over time. The smooth interior also provides excellent abrasion resistance.

CIPP process is typically less expensive than conventional methods of sewer repair, even for everyday problems. When you consider the lost business revenues, traffic congestion and social costs associated with other methods, your savings are immeasurable.



Installation Guidance CIPP

Prior to lining, the pipe must be cleaned by jetting to remove corrosion debris and detritus. Protruding lateral connections also must be removed. Local repairs may be required where the existing pipe is substantially deformed or damaged. After lining, the service connections or laterals are reinstated and the pipe is returned to service, usually within the same day. Lined water mains must be disinfected before returning to service.

APS uses the inversion method for standard CIPP installations, which employs a pressure vessel to apply air or water pressure to turn the liner inside out and push it along the host pipe. CIPP liners may be inflated or inverted with air or water pressure. Lengths installed may vary from short sections over a joint or defect, to full length linings typically 30-150m.

The resin impregnated liner curing method is accelerated by application of heat by circulation of inversion water through a boiler. After the pipe has been cured, the liner is cooled and the ends removed flush with the pipe ends, and sealed where necessary.

APS also uses the UV-Cured CIPP system from our German partner; RELINEEUROPE.

RELINEEUROPE'S modern Alphaliner technology is characterized by its extremely fast curing times and its fast and economical handling on site. The Alphaliner is winched into the existing pipeline and by using air pressure it forms a tight fit against the host pipeline bore. A UV light train is introduced into the inflated liner to allow for a fully controlled and

monitored (by CCTV) curing process. Once the liner is cured the ends of the liner are connected to the manhole and the laterals are cut and re-connected. The UV-Cured CIPP system provides better structural performance at lower wall thicknesses, compared to conventional CIPP systems, thereby maximizing the cross-sectional area and increasing the hydraulic capacity.



Specialized in Quality – since 1978

APS introduced trenchless pipeline rehabilitation here in the Middle East and has since build-up a very long track-record of successfully executing projects in this region and beyond. Companies like DEWA, FEWA, ADDC, AADC, ADSSC, TRANSCO and many more top utility companies have become regular customers of our trenchless pipeline rehabilitation installation technologies. For a complete and detailed project reference list, please contact APS.

APS brings unrivalled levels of innovation, experience and expertise in corrosion engineering and contracting.

We have in-depth knowledge of the industry, our customers' day-to-day challenges and the environmental, health and safety standards in the marketplace. By working in close partnership with our customers, our company is able to provide timely, efficient, cost-effective and above all quality products and services.

APS is certified to and operates in compliance with ISO 9001:2008/BS EN, ISO 14001:2004 and OHSAS 18001:2007.

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