



SOLUTIONS FOR THE REHABILITATION OF GRAVITY SEWER PIPES

RS CITYLINER® LINING SYSTEMS



CURED-IN-PLACE PIPE (CIPP) SYSTEM FOR THE REHABILITATION OF GRAVITY SEWER PIPES.

RS CityLiner is a cured-in-place pipe (CIPP) system for the trenchless rehabilitation of municipal and industrial sewer pipelines.

A flexible liner is impregnated with the two-component epoxy resin system and placed inside of the deteriorated pipe through existing man-holes or access points. A new pipe is formed as the liner is cured within the host pipe. The impregnated liner is inverted by means of hydrostatic water column and cured by circulation of hot water, or inverted by means of air pressure and cured by controlled steam. The resin impregnation and installation of RS CityLiner is done on-site, though a patent pending mobile wet-out system with unprecedented quality controls including computer controlled resin mixing and liner wet-out, data logging and other quality assurance measures exceeding requirements of ASTM F2994 for reliable installations.

The RS CityLiner system can be engineered for partially or fully deteriorated pipes providing semi-structural rehabilitation or full structural renewal. Liner designed for full structural renewal is solely sustainable and may bear all external loads without the support of the host pipe.

APPLICATION RANGE

- 6 to 48-inch (150 to 1220mm) diameter gravity pipe
- Compatible with all host pipe materials
- Seals leaking joints and cracks
- Prevents future internal corrosion and sediments
- Exhibits excellent abrasion resistance
- Average installation length of 500 feet
- Bend of up to 45°
- Joint deflections of up to 10%
- Industrial sewers dependent upon the medium transported and operating temperature

TECHNICAL DATA

- Highly flexible liner (prior to curing) results in a tight fit to the host pipe
- Allows for variations in diameter of the host pipe up to 10%
- Wall thickness 3 to 24 mm
- Temperature range: Standard resin and coating is suitable for long term operating temperature up to 150°F.

Higher temperature applications are evaluated according to project specifics.

INSTALLATION

The host pipe is cleaned prior to the installation of the liner, generally using high pressure water. The cleaning is important to remove loose particles and obstructions to allow for optimum hydraulic performance of the lined pipe. Protruding obstructions, such as improperly installed taps or root penetrations, must be removed flush with the pipe surface.

Utilizing HammerHead® mobile wet-out technology and installation processes exceeding the requirements of industry standard ASTM F2994, the liner is fully saturated with the approved epoxy resin while under vacuum. The wet-out liner then passes through computer controlled calibration rollers and prepared for installation into the host pipe. Installation is performed by an inversion method compliant with ASTM F1216.

Curing is performed using either controlled steam, normally after installation with a pressure drum; or, hot water, normally after installation with a hydrostatic water column.

CONNECTIONS

After completing cure and cool down, the service connections and manhole or shaft areas are re-established utilizing industry standard cutters and equipment.

FEATURES

- Styrene-free, HAP free, VOC-free, environmentally friendly epoxy resin
- Broad range chemical resistance
- Reliable and long-term structural strength
- Unprecedented quality controls with computer controlled resin mixing and liner wet-out, data logging and other quality assurance measures exceeding requirements of ASTM F2994 for reliable installations and long-term performance of the rehabilitated pipe
- ASTM F1216, F2994 compliant

PRODUCT SPECIFICATIONS

Medium	Municipal and industrial sewage
Dimension – in (mm)	6 – 48 (150 – 1,200) pipe diameter
Resin	Epoxy, 100% solids, solvent-free, HAP-free, VOC-free, styrene-free
Liner	Fiberglass reinforced needled felt hose, polyolefin coated
Wet-out system	ASTM F2994 compliant, vacuum saturation with mobile wet-out technology
Curing procedure	Hot water or steam

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