

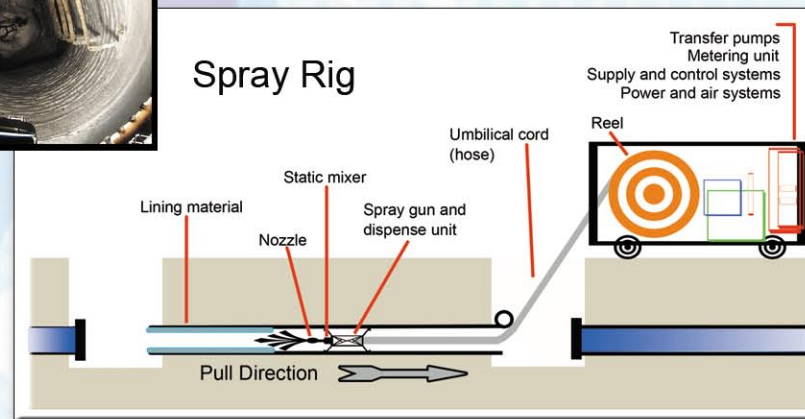
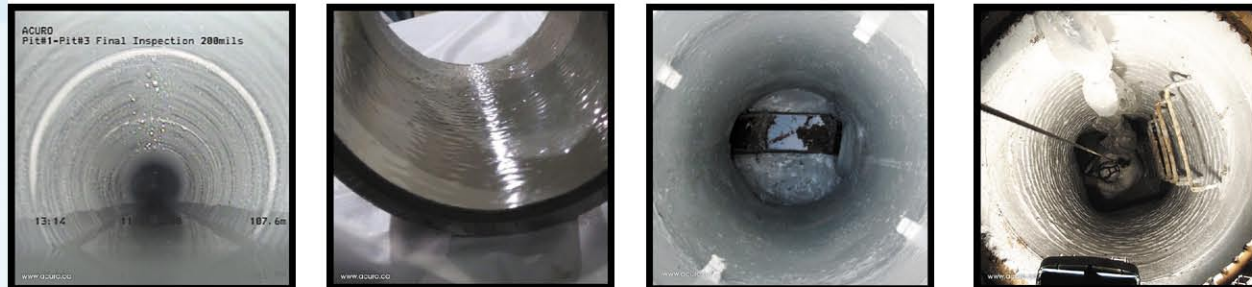
ACURO

INFRASTRUCTURE REHABILITATION

Providing the first NSF/ANSI-61 Certified and ASTM F1216 compliant spray-on, fast-set polymeric resin liner to the potable water industry. Same day return-to-service, by-pass system optional. 150mm (6in) diameter and up.

The liner gels in seven (7) seconds after its application and comes as a non, semi, or fully structural system which can be installed robotically or manually. The liner can be applied in single or multiple coats. It can be used for potable water, waste water, material transfer, gas, and distribution/collection systems.

Acuro is providing products, equipment, services and training to Contractors along with public and private Utilities.



WORK STEPS

One access pit required at each end of the water main to be lined. Temporary bypass system optional.

Water main cleaning using pressurised water and specially conceived nozzles.

Water main drying and if needed, repair of holes and cracks from the inside.

Insertion of spray hose up to 150 meters (500 ft) between access pits.

Spray fast set polymeric resin inside pipe. One coat is 1mm thick. Several spray passes required to obtain desired thickness as per engineering Standard design.

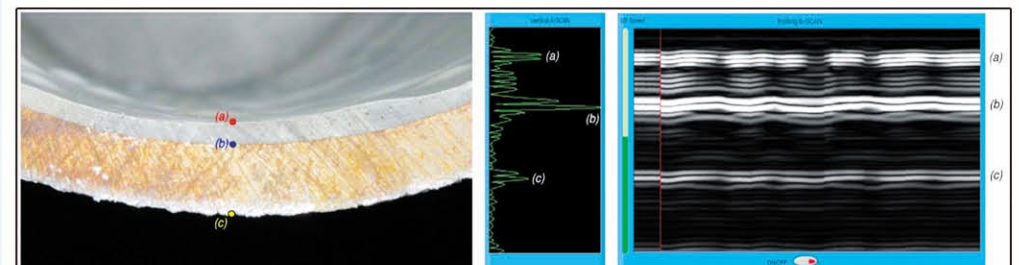
CCTV video inspections before and after cleaning and lining procedures recorded on DVD.

Integrated rig software allows monitoring and control of spray operations.

Excellent bonding to the host pipe, water tightness and circular covering around service lines. When needed, a robotic drill is used to drill-open services.

Continuous and tight fitting, the coating sets-up in only a few seconds providing an impermeable and structural barrier.

Ultrasonic device used to measure liner thickness and adherence to the host pipe.



When inspecting a section of pipe presenting a good adhesion between the polymer coating and the cast iron pipe (see fig. 4), we can clearly see three different spikes in the temporal window (this view is called a A-scan, fig. 5). These spikes in the signal represents the entry echo of the ultrasonic wave in the polymer (a), the echo from the interface between the polymer and the iron pipe (b), the echo of the ultrasonic wave from the outside wall of the pipe (c). On the B-scan display (fig. 6), which shows a section view of the pipe with respect to the probe position, these echoes can be clearly seen as 3 well-marked lines.



USEPA State of Technology Review Report, May 2009 (page 34)
"In the water sector, the emphasis is shifting towards use of sprayed coatings as structural and semi-structural spray linings."

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