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CASE HISTORY



UV Cure Provides Solution for CIPP Repair

Market Segment: CIPP
Sewer Rehabilitation

Composite Application: Cured-in-place pipe

Resin: Vipel® UV-cured Polyester

Host: Sanitary Sewer
Clay

Diameter: 8 inches
(203 millimeters)

Total Length: 2,991 feet for pilot project
(912 meters)

Installed: 2011

Location: Knoxville, Tennessee, USA

The Knoxville Utilities Board knew cured-in-place pipe would bring faster, lower-cost repair to an underground sewer pipe in Knoxville, Tennessee, USA. The 8-inch (203 millimeter) diameter clay pipe had been in service for more than 50 years.

When pre-installation video showed active leaks in the pipe, engineers were concerned how the infiltration might affect a traditional CIPP liner. With traditional CIPP, the new liner is impregnated with resin that chemically cures into a crosslinked solid with the help of heat. Active leaking creates cool spots where potentially incomplete cure can result in lower mechanical properties.

Engineers decided to have the pipe repaired with BLUE-TEK® ultraviolet cure technology from Reline America, Inc. The fiberglass fabric liners for the job were impregnated with Vipel unsaturated polyester that resin producer AOC formulates for UV cure. Because the



UV-cure technology was ideally suited for repairing pipe at the remote job site.



UV Cure Provides Solution for CIPP Repair, continued

resin reacts when exposed to UV light instead of heat, BLUE-TEK impregnated liners can shipped without refrigeration.

“When KUB engineers heard that our liner was not affected by active leaks, they decided to use our technology for a pilot project,” said Danielle Verderame, Marketing Coordinator for Reline America. “The project site was located in a combination residential and industrial easement that has very limited access, lots of trees, and is close to buildings. Open cutting and pipe bursting would have been expensive and disruptive options.”

The pilot project for 2,991 feet (912 meters) was awarded to Portland Utilities Construction Co. LCC. PUCG has years of experience in pipe bursting methods but had yet to perform any type of CIPP repair. Mike Woodcock of PUCG explained how Reline America technical support and AOC resin quality helped turn the pilot project into a new capability for PUCG.

“Reline America did an outstanding job in training our crew,” said Woodcock. “Their team helped us thoroughly learn the technique and become knowledgeable about the equipment and technology.

“We did not select the resin because the liners are resin-impregnated under controlled conditions in Reline’s ISO-certified facility,” Woodcock continued. “Our perspective on the AOC product is ‘no news is good news.’ The resin did everything that was expected – reacting smoothly during installation and performing very well in the finished liner.”

The first installation was so successful that right after the pilot phase was finished, the Knoxville Utility Board added 6,533 feet (1,991 meters) to the project for a total of 9,524 feet (2,903 meters). PUCG continues to get more UV-cure CIPP projects, including work under Phillip Fulmer Way, a bustling street near the University of Tennessee football stadium and basketball arena where any manner of excavation can cause major disruption.

About PUCG

Portland Utilities Construction Co. LLC, specializes in sanitary sewer rehabilitation and replacement services, including video inspection, cleaning, pipe bursting, sliplining, and cured-in-place pipe. The company has headquarters in Portland, Tennessee, USA, and branch

offices in Knoxville, Tennessee, and Houston, Texas. The company has completed projects throughout the Eastern United States. For more information, phone Mike Woodcock at (615) 325-3374, e-mail michaelwoodcok@pucc.org, or go to www.pucc.org.

About AOC

AOC is a leading global supplier of resins, gelcoats, colorants, additives and synergistic systems for composites and cast polymers. AOC knows technology, lives quality and delivers service better than any other supplier. For more information, e-mail CIPP@aoc-resins.com, phone (901) 854-2800 or go to AOC-RESINS.com.

