

Trenchless World



Pipe rehabilitation
CIPP works during the cold snap

Western Europe
Expanding the market share

Auger boring
Take-off by the Boeing plant

- ▶ short hours in which to work each day, the fumes from the resin in close relation to local residents and hospital patients, and the steep slope of the road, this option was rejected.

Instead, the water authority chose to apply a GeoSpray geopolymer lining that was machine-sprayed to create a new structure lining, repair leaking, and return the pipe to its original shape.

“The flexibility of geopolymer mortars makes them an excellent choice for the toughest sewer repairs”

A mechanical sled system was used to apply the geopolymer liner to meet the engineer’s required 38mm thickness. While the GeoSpray geopolymer material can be placed up to 75mm thick in a single pass, two passes of approximately 19mm helped achieve the design requirement.

This flexibility allowed the contractor to maximise application time each day, resulting in a more cost-effective project. From start to finish, the full project was completed ahead of schedule and on budget.

As trenchless technologies continue to supplant dig-and-replace, it is good to know that there is an emergent technology in the toolbox for engineers, contractors and asset owners. The flexibility of geopolymer mortars makes them an excellent choice for the toughest sewer repairs. ▼



Irregular shapes can pose a difficult rehabilitation situation

This article was written by John Hepfinger, global market manager, Storm & Sanitary, Milliken Infrastructure Solutions

The pipe that came in from the cold

Matt Timberlake, vice-president of contractor Ted Berry Company, talks to TW about CIPP works during a New England cold snap



Installing the UV light train into the manhole and preparing to cure the liner

During spring, US\$1 million in sewer and pipe works took place in a picturesque beach town on the southern tip of Maine, the northernmost state on the east coast of the US.

In a combined project, York Sewer District and York Water District oversaw works on Church Street and Shore Road in York.

The Church Street project involved replacing existing lines with bigger mains at a cost of \$255,000 for the water district and \$200,000 for the sewer district.

The old piping had structural defects and leaks in the joints that caused water to come into the sewer system.

As the clean groundwater

enters the sewer system, it has to be pumped through the waste-water treatment plant and



Q&A session



Ted Berry Company project team, left to right: Matt Timberlake, Tyler King, Andy Bryant, Matt Bronish, Shawn Ready, Dave Bilodeau, Isaiah Bean and Matt Therriault

Q How is CIPP received in the construction community?

Traditionally, many parts of North America are very receptive to rehabilitation by CIPP. However, many areas of the country, believe it or not, have still either not heard of the technology or do not understand the technology and how it can be used to structurally rehabilitate buried pipes without the need to dig.

In many areas we still see lining specified only on areas where digging would be overly invasive or disruptive, when in many cases it should be considered as part of a long-term CIPP, as it is much more cost-effective than excavating and laying a new pipe.

Q What is Ted Berry Company's history and experience with CIPP?

Ted Berry Company has been performing trenchless rehabilitation and renewal for over 10 years. However, UV CIPP is our newest service offering and has complemented the company's core services well. Ted Berry performs pipe bursting, sliplining, sectional CIPP point repairs and traditional felt CIPP for projects of small diameter and length.

The company recently performed a CIPP sectional point-repair project under a major New England highway that consisted of installing repairs inside existing and newly constructed storm drains from 15in to 48in in diameter to repair structural defects and joints that did not pass the final inspection by the owner.

Q How is Ted Berry Company finding demand at present?

2014 was a good year for Ted Berry and the company continues to see growth in water-pipe rehabilitation and storm-drain rehabilitation, as those systems are traditionally run to failure and, when they do, the results are very noticeable and disruptive to the public and economy.

Ted Berry has a great outlook for 2015 and looks forward to continuing to educate public utility system stakeholders to how trenchless technology works and how it can help them manage their collection and distribution systems long term through reliable and cost-effective solutions.

"The Maine spring did not fully co-operate and we had below-freezing temperatures and snow on one of the installation mornings"

treated, which adds expense to the project.

Most of the 1,100ft (335m)

section of aged and decaying clay pipes was replaced using traditional open-pit excavation and replacement techniques (at depths of around 10ft) where trenchless could not be employed.

TIME FOR TRENCHLESS

Conservationists will be pleased to read that 414 linear feet were rehabilitated using ultraviolet-cured cured-in-place pipe (CIPP) in two separate runs. One 44ft length had an internal diameter of 8in and the remaining 370ft was 12in ID.

"The project was originally scheduled for three days and was completed in three days, even though the Maine spring did not fully co-operate and we had below-freezing tempera-

tures and snow on one of the installation mornings," Matt Timberlake, vice-president of Ted Berry Company, tells *Trenchless World*.

Timberlake identified challenges as being co-ordination with a nearby excavation project that was replacing water, storm drains and a section of sewer that had failed and could not be rehabilitated with CIPP.

Seven crew members worked on the project in total – a senior project manager, construction manager, project supervisor, ultraviolet CIPP cure-system operator, blower-system operator, and two technicians.

Reline America from Saltville, Virginia US, manufactured the fibreglass pipe and relining materials. ♥

Preparing the UV light train for installation into the manhole

