

TECH TIPS

FROM NASSCO

TECH TIPS BY NASSCO IS A BI-MONTHLY ARTICLE ON TRENDS, BEST PRACTICES AND INDUSTRY ADVICE FROM NASSCO'S TRENCHLESS TECHNOLOGY MEMBERSHIP PROFESSIONALS.

SEWER POINT REPAIRS

By NASSCO member Mark Metcalfe, Vice President Operations, Hoffman Southwest Corporation

Damaged sewer lines are a big problem across the United States. Hundreds of miles of sewer lines are rehabilitated every year. In addition to the miles of sewer pipes needing repair, there are millions of spot or point repairs that need attention as well. Damages such as longitudinal cracks, missing pieces of damaged pipe, offset joints, root intrusion or leaking joints are conditions that often need to be repaired.



SEWER LINE BEFORE CIPP POINT REPAIR



SEWER LINE AFTER CIPP POINT REPAIR

MOST CIPP REPAIRS CAN BE COMPLETED IN 2 TO 3 HOURS INCLUDING SET-UP TIME. CURE TIMES FOR DIFFERENT CIPP PRODUCTS CAN RANGE FROM 8 TO 10 MINUTES FOR SOME OF THE UV CURED PRODUCTS AND UP TO 2 HOURS FOR SOME OF THE AMBIENT CURED RESINS.

TRADITIONAL SOLUTIONS

One method frequently used for repairing these damages in sewer lines is "excavation and repair." Excavation in a street can often be very expensive and time consuming due to the need for materials and equipment, such as a backhoe, dump truck, possible bypass equipment, traffic control equipment, new asphalt material, backfill material and more. Often, the bigger cost is disruption of traffic and blocked access to a residence or business. Excavated point repairs typically take 1 to 2 days to complete.

Another faster, often less expensive and less disruptive way to perform sewer repairs is from inside the pipe, using the manhole access. Several methods are available to contractors who perform sewer repairs from inside the pipe, through the manhole access. One method involves pulling a stainless steel sleeve (that is set on a carrier) inside the sewer line, using a CCTV camera to guide the sleeve. The sleeve is locked into place over the damaged area, at which time it is usually tapered at the end to allow for a smooth flow.

CIPP REPAIR

A second popular method for completing sewer repair within the pipe includes the use of CIPP repairs. Cured-in-place-pipe liners have been in use for over 30 years in trenchless sewer relining applications. CIPP applications in point repairs of sewer lines often use a similar product with the same strength and flow characteristics.

THE POINT REPAIR PROCESS

In the sewer line point repair process, using the CIPP method, the lining material is generally composed of a felt and/or fiberglass tube or mat that is saturated with epoxy, silica or UV resin. The saturated material is then placed on an inflatable bladder or carrier that is placed in the pipe through the manhole access. It is positioned over the damaged pipe, while the carrier is inflated to press the saturated material against the pipe, holding the material in place until the resin is cured.

The repair will generally have a smooth, tapered finish at the ends, between the repair and the host pipe. The entire process can be observed with a CCTV camera to insure proper application. CIPP repairs can usually be done in lengths of 6" to 20'+ and in pipe diameters from 4" to 24".

BENEFITS

There are several benefits to the CIPP methodology for sewer line point repairs. Bypass is rarely needed, since many of the CIPP products use flow-through carriers, or the repair is done when flows are low and can be restricted or plugged for a short time. Most CIPP repairs can be completed in 2 to 3 hours including set-up time. Cure times for different CIPP products can range from 8 to 10 minutes for some of the UV cured products, up to 2 hours for some of the ambient cured resins.

For more information, please visit NASSCO's website at www.nassco.org.