The Pipe Liner Newsletter

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Planning --- The Difference Between Winning and Losing

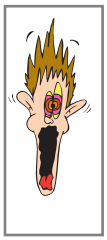
The customer has a 4 inch sewer pipe between the house and the street. It's in bad shape and needs repair or replacement. Because of restoration and cost, you've decided to line the pipe in two shots with a cured in place liner(CIPP). You dig one spot in an accessible area where you could line both ways and install a clean out after lining the pipes. You have a tie in toward the street that you need to open with a cutter after it's cured. The line is clean, and you have 4" tube and resin ready to go. Looks good, and you go ahead and invert a liner toward the house, set up your curing control box, and shoot the second line toward the street. Thinking you had a good job, you cool your jets for a few hours, pull the calibration tube, and run your camera into the lines to admire your work. While you are setting up the camera, the homeowner comes out asking why his lower level bathroom is full of water. Denial sets in and you state that it couldn't be you. As you run the camera toward the house, you are horrified by the wrinkled mess of crumpled up tube that has cured out, in the run to the house. You are racking your brain. Why did it do that? You decide to look the other way, only to see the tube falling away from the 10 o'clock position running several feet toward the street. Now you are beginning to panic. What went wrong? You measured the line, and it came out the right length. The resin hardened, so the mix had to be right.

So what went wrong?

1. Let's start with the tube falling from the wall of the pipe appearing to be soft and not hardened from the 10 o'clock position about where the tie-in was located. Until the exothermic process changing resin from liquid to solid is complete, water can wash away the resin. If the tie-in was live and water was allowed to keep running into the lateral, it's very probable that the resin was washed away, and little, if any left in the tube. Turning off all water to that drain would have made this portion a success instead of a do over. Resin lean tube has no structural capacity, allowing it to sag and not be what you intended to install.

2. Looking the other way, into the 4" cast iron, simple physics caused the ugly looking lining product. A 4" cast iron pipe measures about 3 ½" inside diameter. When you stuff a 4" tube in 3 ½" space, some of the tube has to wrinkle up to fit. While it looks ugly, it may be okay provided it doesn't start collecting debris. A better selection of material would have been WovoLiner™, in a 3" diameter that can stretch to fit a 3 ½" cast iron pipe, be thick enough to meet F1216 thickness calculations, and give the customer a liner that looks good and one that he's happy with.

3. What about the water in the bathroom. Remember that when you are lining a pipe, there is air in the pipe you are lining. When you begin pushing air out of the pipe, the air has to go somewhere. If you are pushing toward a stool, and the water in the stool is blocking the air from getting out of the pipe as you line it, your air pressure will, as it builds, blow the water out of the toilet. Thankfully, your customer wasn't sitting on it when the slug of air pushed the water out of the stool. Turn off the water supply, and flush the stool before you begin lining.



In summary:

1. Make sure no water is running anywhere in the area that you are about to line. *2.* Flush the toilets and make sure the bowls are empty. (shut off water supply to toilets). *3.* Use the correct size liner for your line. *4.* Remember the 5 P's: Proper Planning Prevents Poor Performance!

Controlling the Environment While Lining

The weather changes day to day, month to month, and season to season, and we're all affected by the changes. This past winter, many of you wondered what went wrong when it was taking 8, 10 or even 12 hours to get the lateral lining tube hard enough to consider walking away from the job and feeling like it's done. If you could control the weather, you could control the lining process and give yourself plenty of working time when mixing and impregnating, and a short cure time. If you could change those things, you could make a lot more money and save a lot of worry and time. If you look at the temperature guide on the resin pail, you notice that as the temperature declines, the cure time increases and vice versa. Pipe Lining Supply has a device that allows you to increase the temperature inside the tube as it cures, and will dramatically speed up the curing process. The device is a Hot Kick™, and it will cut the cure time by 50% or more. Simple math applies... 2 technician's time for 6 hours less, including tools and transportation, could easily save $300 to $500 per installation. Time is money and this time saving device can save you a lot of time and money. Contact us for details, and if you made it this far in reading this article, ask for a free demo of the Hot Kick™ and we'll give you one.

Hot Kick ™

Water Flow Heater ***HK-OM-148-MX***
Type: Combustion Type: Pressure Vapor Forced Flue
Heating Supply System: Instantaneous
Source of Water: Direct Connection to Main Supply
Ignition: High Voltage Discharge Spark
Fuel Consumption: 1.05 gal/h
Fuel: ASTM D396 No. 2 Fuel Oil
Capacity of Heat Exchange: 5.10 gal
Efficiency: 88%
Hot Water Input: 148,000 BTU/h
Electrical Rating: 120 Volts AC, 60 Hz
Ignition - 120W Burning - 98W
Dimensions (WxHxD): 30"x44"x38"
Weight: 120 lbs. (Empty)
Safety Device: Over-heat protector, Ignition safety device, Empty burning protective device, Heat exchanger bi-metal switch, Temperature fuse, Fusible link valve.

Call Pipe Lining Supply for a free demo today!
714-630-6311

CIPP Lateral Lining Myths and Legends!

The stories get taller the farther down the line they go! So let's separate lining fact from fiction:

Myth: A 4" liner can easily line a 4" cast iron pipe, and it will look good when the liner is cured out.
False: The old law of putting 3 pounds of stuff in a 2 pound bag still applies to this application. The fabric lining material that is 4" in diameter introduced into a 3 ½" ID (4" Cast Iron Pipe") has to wrinkle to fit. The wrinkling may be structurally sound, but may catch debris and clog over time. A better solution would be to choose a stretchable material like WovoLiner™, a 3" stretchable product that will stretch to the 3 ½" ID with a finish thick enough to meet the ASTM standards. Regular 3" tube won't stretch enough to fit closely to the host pipe, leaving an annulus between the liner and the host pipe.
Myth: 3 millimeter tube is all the thickness you need for any size pipe and condition.
False: Depending on depth, live load, dead load, water table and strength of the resin, the thickness requirement for a particular site may require more than 3 millimeters. If your supplier only has 3 millimeter available, ask him to provide you the thickness calculation for your site with his product before installing a product that is too thin. If the product is too thin for the load, over time it will buckle, forming a distinctive heave in the liner.

Myth: No liner can be installed through a clean out without digging up the cleanout.

False: With the Liner Gun™ and training, this can be done repeatedly. It boils down to means (equipment) and methods (knowledge of applying work instructions)

Myth: Rolling out the tube with a carpet roller after resin impregnation is a good way to distribute the resin evenly throughout the tube.

False: Two problems surface with this method of resin distribution. There is no uniform thickness and in those areas where too much resin has been squeezed out, roots can, and will grow through the resin lean tube. A second problem that occurs is the entrapment of air in the tube that may cause weak spots or bubbles in the finished product. A better method is to vacuum the air out of the tube as resin is introduced, and to run the liner through a calibration roller before putting it in the ground.

Pre-lining - What is it and do I need it?

In an earlier article we discussed failure due to running water washing resin out of the tube. When you investigate the line that you are considering lining, the presence of water should send up a warning flag. If you notice a section of pipe missing and a cavity where the pipe used to be, a warning flag should go up. A pipe with an unusual transition or turn should also be noted, as well as a cast iron pipe with no invert or bottom left in the pipe. Any of these conditions should make you consider pre-lining the host pipe with a pre-liner. A pre-liner is nothing more than a light-weight, fiberglass reinforced poly tube the same size as host pipe. It is installed into the host pipe before the liner. This will give the resin impregnated tube a raceway to easily follow down the course of the pipe without hanging up in a void or missing invert. It will ensure you that no water from any source can wash away the resin before it cures, and makes the trip around a turn or transition much easier. The 4" material is less than a buck a foot, and is a cheap insurance policy - much cheaper than doing the line over or digging it up after it failed. It's easy and will give you the confidence that you've minimized failure.

Factory Installer Certification

Pipe Lining Supply, Inc. offers factory installer certification for Cured In Place Pipe Lining and Cured In Place Point Repairs. If you want credentials to go along with your ability to line pipe, sign up for one of our training sessions and become more valuable to your customers and employers. The Certification needs to be renewed every 2 years, so call now to schedule your certification or renewal.

MAXLINER

This is to certify that
YOUR NAME HERE
is a qualified installer of the
MaxLiner™ CIPP lining process.

Liner Gun System

USER FRIENDLY

BEFORE

AFTER

NO DIGGING OR DAMAGED LANDSCAPING
COMPLETE REPAIRS IN HOURS, NOT DAYS
STOPS PIPE CORROSION INSTANTLY
PROTECTS PIPES FROM TREE ROOT DAMAGE
RESTORES PIPE FLOW, EVEN BETTER THAN NEW

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*Based on credit approval

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MBE/WBE Goals

Pipe Lining Supply, Inc., is now a SBE, and WBE in the state of California. If you have Minority business goals as part of your work, Pipe Lining Supply, Inc., can help you meet your goals. Many public projects involving lateral lining may require MBE/WBE goals, and our supplying you materials counts toward your goals.