

# TECH TIPS

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## CARE AND FEEDING OF YOUR NEW CURED-IN-PLACE PIPE: CLEANING AND MAINTENANCE

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In last month's NASSCO Tech Tips we discussed the importance of inspecting Cured-in-Place Pipe (CIPP) and the special considerations that don't necessarily apply to traditional pipe inspection. This month's tip continues the discussion with best practices in the cleaning and maintenance of CIPP.

### Cleaning and Maintaining CIPP

These days most municipalities and mainline service contractors have adopted high pressure water flushing and cleaning technology. Normal pipeline cleaning equipment in the 4000psi or less range is perfectly acceptable for routine cleaning, blockage removal and lateral maintenance, and this includes the use of pipe ball flushers and heavy flushing sleds. Hot water can be used safely, however steam should only be utilized at ambient pressure.

Some consideration should be made to protect CIPP surfaces from physical contact with the rotary heads of spinner nozzles. Use of positioners on the head bodies is usually sufficient for this purpose, but they should be checked during normal inspection for fin wear that could reduce the fins to a height that might allow contact. Additionally, these heads should be kept moving during cleaning operations to reduce any chance of damage to the liner surface. Chain flails, milling heads and root saws are an absolute NO when dealing with a lined pipe. Such tools can quickly rip through a liner (or any other non-refractory or metal pipe material).

Some legacy cleaning methods are still used these days and they can potentially cause significant damage to pipe liners. Rodding machines, in particular, can cause a lot of damage to liner surfaces, especially near the manholes, and should never be used in lined pipes unless it is an absolute emergency. Use of cable drawn scrapers and hard mandrels are also a hard NO for use in lined pipes, especially where laterals or main/lateral connection seals have been installed. Rubber mandrels are acceptable in a pinch, but if used, carefully ensure proper sizing.

Cable winches with buckets are slightly less risky to liners as they do not have sharp edges and are generally much smaller than the line being cleaned. They should not, however, be a first choice for routine cleaning of CIPP. When selecting the bucket size, care should be taken to account for the pipe diameter reduction resulting from the liner. Liners can cause a diameter reduction of 20% or more under some conditions. Removing a wedged bucket is not something you want to have on your to do list.

### Other things to keep you up at night

For 98% of installations the information presented above will keep your liner healthy and happy for decades. However, there are a few other, less-common situations that should be kept in mind. While they are relatively rare, stranger things have happened.

- 1) Some old-school plumbers have a great affinity for their auger machines. They get called in to remove roots or other blockages in lateral lines and stick the auger in the pipe with some big root saw blades and hammer it. These blades and augers can play havoc with main/lateral connection seals and lateral interface grouting. If lining is new to your community, a quick letter to all your local plumbers letting them know about the liners might be worth considering.
- 2) Fires aren't usually a problem in sewer systems, but they can be a big problem for culverts. Grass fires and vehicle fires can cause a lot of damage to pipe liners. If such a situation occurs, the liner should be inspected for scorching, melting or other damage.
- 3) Industrial connections to a system could be a risk to lined pipes. Make sure to review your industrial connections to ensure compatibility with your liners.