

## Flexible Gas Pipe

By Joseph P. Guzzo

Never in my recollection has a new product come under such scrutiny and has had more problems than C.S.S.T. It seemed that the product was doomed right from the start. Even the name C.S.S.T. was confusing. And now after being on the market for years, many in the industry still do not know what it stands for. Many call it by one of the brand names - Trac Pipe for example seemed to stick. I shall call it flexible gas pipe, even though it is not pipe and the correct term would be tubing, flexible gas pipe is easier to understand, more universal.



Each brand of flexible gas pipe had its own distinct joining method and fittings. This is not entirely a bad thing, but it did make it a little more difficult. Most plumbers would go with whatever their regular supply house carried. Not so great if the supply house decided to change brands.

Then there was the certification process. In the beginning this proved to be a joke. I recall one plumber coming in for a gas permit. He wanted to use flexible gas pipe. I asked him if he had his certification, he said no, so I told him he could not use it. Twenty minutes later he came back to the office with his certification card. It seemed certification consisted of the guy at the supply house handing him the manual and card. Soon the State caught wind of this and forced a real, mandatory certification process.

Nail holes obviously were and are a big concern, the fact that when installed inside a partition it must be left loose. The theory being that if a nail or screw was to be put in the wall it would push the pipe away instead of puncturing it. This method goes against all plumbers' instincts and training, to clip and securely hang all piping, the more clips the better. Also you could not use any old striker plate, they are not strong enough. You must use each brand's own striker plates as part of their system. In addition piping on an outside wall must be sleeved inside flexible conduit. The fear of nail holes prompted the second pressure test upon final inspection.

Then there was the corrosion problem. I was directly involved with this issue. One day a plumber came to my office with a section of flexible gas pipe he had just cut out of someone's basement. The owners had smelled gas in the house. The plumber, after a test and extensive search, found the leak. The pipe had a series of pin holes. The pin holes were located near the fitting at an exposed part of the stainless steel. Some brands require you to peel back the yellow jacket to make up a fitting. Others use the yellow jacket under the joint leaving no exposed pipe. This particular brand had exposed stainless at each fitting. The house was only two years old. Investigations took place with members of the Plumbing Board, manufacturers reps, and the manufacturers themselves flew in from out of state. They originally blamed the corrosion on pipe dope or leak detector, and tried to explain to me that the exposed ends were not properly covered. At that point I pulled out their own brochure. It showed full color photos of installations with the ends clearly exposed. They were embarrassed to say the least. This prompted the use of yellow tape. Again not any tape, it had to be their yellow tape to be installed on all exposed ends. They

also emphasized that only certain non corrosive leak detector could be used and the stainless could not be exposed to any type of pipe dope, or anything else that may cause corrosion. The true cause of the pin holes was later found after chemists tested the pipe. It was caused when masons were coating the inside of the foundation. The coating apparently splashed on the pipe. It took a couple of years but eventually pin holes formed and caused a leak.

Finally, we are now in the midst of the grounding / bonding problem. Apparently a lighting strike in another state caused property damage. This prompted a bulletin by most brands that all C.S.S.T. must be grounded and or bonded. The problem was there were no guidelines for grounding or bonding, and this new requirement was put right on the installing plumber. They gave out these clamps at the supply houses. Many or perhaps everyone was confused. What do we do with the clamp, install it on the pipe, or give it to an electrician? When should it be bonded, and when should it be grounded, and what's the difference? Plumbers and Inspectors struggled with this for over two years, until the Board took action and banned the use of all C.S.S.T. on December 1, 2008. The ban was solely based on the grounding problem.

Then just about two months to the day C.S.S.T. was reinstated by the Board on February 4, 2009. A resolution was reached. Among the highlights were that Plumbers and Gas Fitters are not responsible for the bonding of C.S.S.T. Everyone involved concluded this was electrical work, to be performed by electricians. However and this is a big however, part of the wording in the resolution states that no gas piping system using C.S.S.T. and requiring bonding by the manufacturer can be approved without proper bonding, and an electrical permit is obtained from the local Electrical Department. So although C.S.S.T. has been reinstated, Inspectors have no guidelines as to how to issue a gas permit. Do we each come up with our own system of obtaining electrical permits, and coordinating inspections? Or will there be set guidelines all Inspectors will follow? I anxiously and hopefully await uniformity.

So what is it with this flexible gas pipe? Why has it had such a difficult time mixing in with all the other new products and technologies of the past 25 years? Could it be it was just too radical for all the purists? I believe the answer is right here - it's **Flexible Gas Pipe**. Many plumbers could not believe you would run a highly explosive and flammable gas through someone's home with this product. It's thin, and has no substance. Plumbers are used to solid gas pipe that is much less susceptible to damage. And is it really a time and labor saver as it has been marketed, after all the installation regulations, and precautions, like certification, corrosion, bonding, extra testing, and protection? Have we given this product enough chances? One thing is sure the jury is still out on Corrugated Stainless Steel Tubing, as we await a verdict from the court of public opinion.