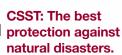
## THE FACTS ON CSST FLEXIBLE GAS PIPING:

# The Only Gas Piping that Withstands the Forces of Nature: Quakes and Lightning





earthquakes, lightning, tornados—black iron pipe can fracture and leak leading to deadly results. In the U.S., there are about 65 people killed every year in gas explosions. That is why Corrugated Stainless Steel Tubing (CSST) was developed—first in Japan and then by the American Gas Association and its Gas Research Institute in the United States—to eliminate the danger of rigid gas piping. Twenty years ago, the American National Standards Institute published the first CSST product standard—ANSI LC 1.



Since then, over 750 million feet of CSST has been installed in over five million homes in North America.

# You can't beat CSST's safety track record.

When installed in accordance with building codes and manufacturer's instructions,

CSST is less likely to be damaged by lightning than other systems in the building. According to the National Fire Protection



Association (NFPA), there are on average about 100 fires every year caused by lightning damage to black iron pipe installations.

But there have been no deaths or injuries caused by CSST—which can't be said for black iron pipe.

## Approvals that give you and your customers' confidence.

CSST is approved by the NFPA, International Fuel Gas Code (IFGC) and Uniform Plumbing Code (UPC). Black iron pipe, much of which is imported from Asia, is not listed to any national standards for gas piping—which adds to your risks!

#### TracPipe®CounterStrike®: The enhanced CSST that adds protection.

The tradition of CSST innovation continues with TracPipe®CounterStrike® CSST—which is listed to ANSI LC 1 Standard,

UL for fire resistance, and Factory Mutual for seismic resistance. And it's



the only CSST listed by ICC Evaluation Services-PMG 1058 for enhanced lightning protection without additional bonding

(unless required by local codes).

Handle natural forces and tough jobs with the safest and most effective flexible gas piping available—
TracPipe®CounterStrike.® It stands up when black iron pipe cracks!





#### 1. Based on a history of

research: Corrugated Stainless Steel Tubing (CSST) is a flexible gas piping system developed in Japan in the 1980's as a superior alternative to black iron pipe, which failed with deadly consequences during earthquakes and other natural disasters. In that same decade, the American Gas Association and its Gas Research Institute initiated extensive studies of CSST as a gas piping solution for the U.S. In 1991, the American National Standards Institute published ANSI LC 1 for "Fuel Gas Piping Systems Using Corrugated Stainless Steel Tubing (CSST)." This standard applies to natural and propane gas piping systems using CSST in residential, commercial, or industrial buildings. It includes tubing, fittings, and other necessary components. It is noteworthy that black iron pipe and black iron fittings are not approved by any national standard nor subjected to any third-party testing.

2. Outstanding safety track record: When properly bonded in accordance with building codes and manufacturer's instructions, CSST in general and TracPipe® CSST products in specific are less likely to be damaged by lightning than other building systems. Over nearly 20

years and five million installations, there have been no deaths or injuries associated with CSST.

Black iron pipe has a clear history of leakage from its numerous joints that contribute to system damage, fires, and death.

#### 3. On-going product development:

The TracPipe brand of CSST piping has been sold for nearly 15 years. For nearly five years, we've been selling a product with enhanced lightning protection called TracPipe® CounterStrike.® This product incorporates a patented black jacket over the CSST tubing that safely dissipates the energy of an indirect lightning strike without additional bonding (although bonding may be required by local codes). TracPipe CounterStrike CSST uses the same AutoFlare® fittings as our original vellow TracPipe product, providing a tested system solution that simplifies installation and ensures safety.

4. Recognized testing and approvals: TracPipe CounterStrike CSST is approved by model codes including the National Fire Protection Association (NFPA), International Fuel Gas Code (IFGC), and Uniform Plumbing Code (UPC). It is also listed to ANSI LC 1-2005, as well as Factory Mutual (FM) for

seismic resistance, and Underwriters Laboratories (UL) for resistance to fire.

5. Avoiding handling and material hassles: Working with rigid pipe involves major handling and material hassles. First, there's the capital cost for equipment and tools required for cutting, threading, and deburring rigid pipe. Then there's the hassle of storing and disposing cutting oil in compliance with environmental regulations. Adding to these difficulties is the impact on human resources. Workers lugging 21-foot sections of Schedule 40 pipe will lead to workers' compensation claims. Time is lost training employees on the old practices of rigid pipe installation and leak checking. And finally, material is lost in scrap and rework by new trainees and old pros alike. In contrast, CSST piping removes these material and human-resource hassles. A higher strength-to-weight ratio and seamless flexibility make handling and installing CSST easy.

By combining earthquake and lightning protection with a faster, higher-quality installation that avoids the leak-prone joints of rigid pipe, the TracPipe CounterStrike CSST piping system turns CSST critics into our best customers.

### Learn more at www.tracpipe.com

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