

“The future brought to life”

Corrugated Stainless Steel Tube

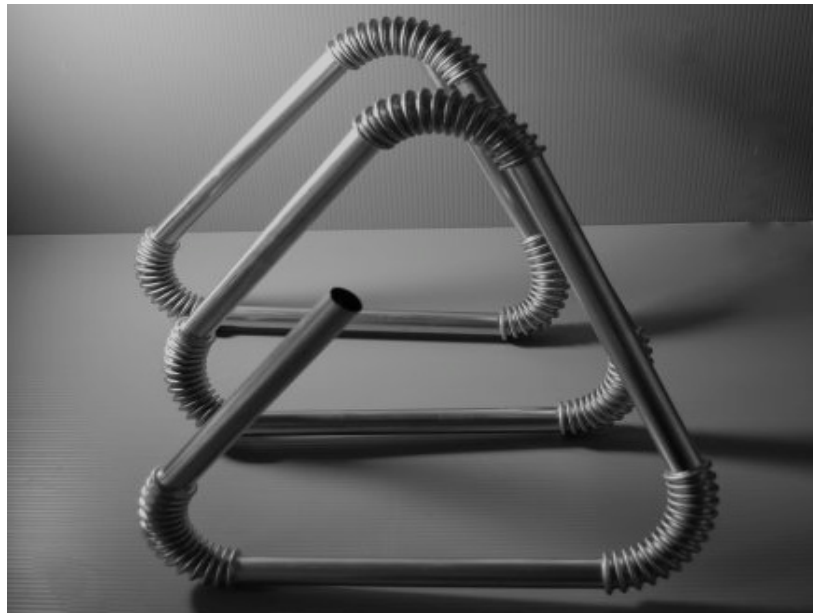
Designed for Urban Infrastructure

This is the Corrugated Stainless Steel Tube (CSST) that the Bureau of Waterworks, Tokyo Metropolitan Government has been using since 1998.

It is astonishing to note that, although Tokyo, with its estimated population of 13million people is the largest city in East Asia, it only experiences a mere 2.7% in leakage ratio.

Behind this incredible success is the advent of CSST technology, which is now at the center of attention of many other major waterworks in Asian countries.

A critical lifeline of an earthquake-prone country, CSST technology was tested for a demanding 16 years by the bureau, before eventually being accepted into Japan’s capital infrastructure.



Here, CSST is seen with its corrugations in action. Such flexibility as seen on this photo was not possible with previous pipe designs.

Not only did CSST prove its worth in durability performance, but it also won the favor of many on-site engineers, who accepted the technology for its high quality and ingenious piping system.

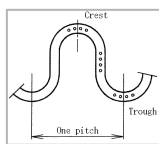
This fact stands testament to the solution towards sustainable and low cost maintenance that CSST provided.

Nominal diameters for CSST, 20mm, 25mm, 40mm and 50mm are available. The pipe length for all diameters is 4000mm only. Each pipe has 8 corrugated sections.

One factor that contributes extensively to the success of CSST technology is the fact that corrugated and straight sections of pipe are the same component, not attached together via a connection of any sort.

“Uncompromised Elaboration”

Corrugations of CSST pipes are created with a process known as Hydroforming, where metal is formed into components by jets of water pressured to over 250kgf/cm² (about 245bar). With a margin of tolerance for the pipe thickness difference limited to less than 10%, the revolutionary technology is extremely advanced. This makes for an extremely elaborate and strong pipe that can withstand high water pressures and substantially reduce leakage.



Of course, our company’s hydroforming technology has been used for other applications as well, such as Japan’s most-advanced automobile engines.

“Customer Awareness”

The corrugated sections can be bent by hand if their diameters are less than 25mm long. Even pipes with diameters of 40mm or more can be bent with ease by specialized bending tools. This enables an extremely simple on-site procedure for engineers of any skill-level.

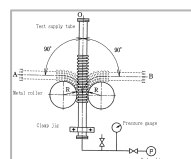
Before CSST is brought into use, a sample pipe of the selected product group undergoes a rigorous examination by the JWWA G119 (the test standard for Corrugated Stainless Steel Tube for drinking water), where the pipe is bent to a right angle a total of 20 times.



cr.: Mazda Motor Corporation

According to a study carried out by Bureau of waterworks, Tokyo Metropolitan Government, more than 95% of leakages occurring in underground pipes are the direct result of leaks in different pipe components where connections (fittings) are required to bring water from a supply to the rest of the system. Since CSST is extremely flexible, it enables the drastic decrease of pipe fittings, which provide vulnerabilities to any water system.

On the top of that, CSST is made of SUS316, a stainless steel that is so resistant to corrosion, it has been nicknamed “the material with a century-long durability”. As a customer, you will be able to appreciate the true value of this product with its low LCC (life-cycle cost).



“Made in Asia, Made for Asia”

In 2010, the Taipei Water Department formed a way to replace the aged service pipes with CSST. The pipelines rehabilitation project in the city aiming to replace about 80 km of network per annum is now ongoing.

Besides the Taipei Water Department, the Taiwan Water Corporation, the largest waterworks in the country, has launched trials for CSST since 2011, in the regions under the corporation’s authority. The replacement of first-generation water pipes with CSST is estimated to progress faster than expected.

In August 2011, we launched full production of CSST in Taiwan. It is part of our ambition to explore and acquire the market needs in Asia in both the quality and price-competition fields.



Taoyuan (Taiwan) factory



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