

The background of the slide features a collection of Megatite fittings, including elbows, tees, and straight sections, arranged in a circular pattern. The image is semi-transparent and has a blue color overlay.

Corrosion Resistant Service Fittings

Megatite Fittings

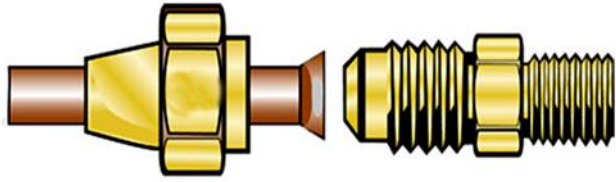
History of Brass Fittings



- First gravity feed water system in North America was installed in 1652 in Boston, not for drinking but for fighting fires.
- In 1772 the first public water system was in use in Bethlehem, PA, the system supplied untreated water to the locals, treating and disinfecting water didn't happen till 1908 (New Jersey).
- Sometime in the early 1860 the H Mueller Company based in Decatur, Ill started making "Plumbing Brass" for the water service industry. The company started in 1857 as a gun smith shop.
- Typically, the first brass watermain fittings were know as a "barrel tap" which a hole was drilled in the pipe and a cone shaped mainstop was hammered into the wood or cast-iron main.
- Other company would eventually offer similar fittings to the Mueller design but at later dates.

History of Brass Fittings

Flare Fitting



Flared Copper



- Most common way of connecting copper tube to fitting was called flaring, an individual would use a hammer and flaring tool to spread the end of the tubing.
- Compression style or Packjoint style fittings designed for copper tube did not come out till the 1950's, the "Compression Joint" more commonly used today was released in the 1960 and made specifically for copper tubing.
- The 110-Style compression uses a SS cupped ring imbedded into a rubber gasket, once the nut bottoms out on the body a tight compression grip and seal are achieved.
- Works well with Copper tube, however it was redesigned to accommodate plastic pipe, allowing it to grip without cutting into the plastic piping.

History of Service Tubing

- Most common type of service piping used prior to 1945 was lead (strong X-strong and Double X strong), copper did not become popular until after WW II with the abundance of copper after the war effort was over.
- Lead pipes although not used anymore are still in service across North America, most on the utility side are being replaced due to the know harmful effects of leaching (estimated 6-10 Million still in use USA)
- It was commonly used due to its' low cost and flexibility during installation.
- Easily joined by either a coupling (cone face) or in some cases melting lead and wipe joining.



History of Service Tubing

- Copper tube has been used successfully for a number of years and in some larger municipalities still used today.
- Copper works well with an all-metallic potable water system, but due to the hydro grounding to the water service corrosion is a problem.
- Copper services in some communities are only lasting about 5 year and are corroding.
- Is has proven to be very unstable price and over the last year has rose considerably \$5.90 per pound CDN (November 22) From January to November an increase of 30% approximately

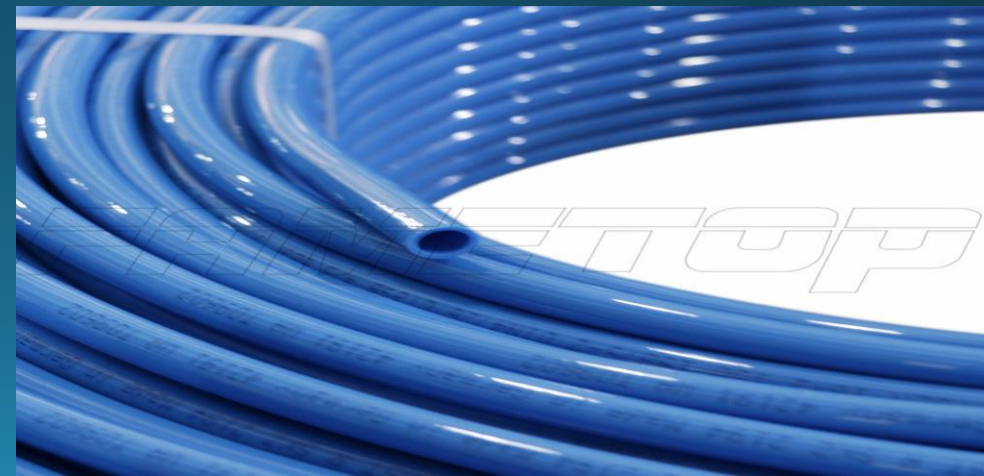


History of Service Tubing

Plastic Service Tubing

- Through history there has been different types of plastic service tubing used but some municipalities have been using polyethylene or HDPE since 1950 it was invented in 1898.
- Most common used plastic pipe currently is PERT or PEX style which has stronger properties than Poly, better flexibility and easier to work with.
- Other plastic have been used for water service, but most have standardized on the above mentioned for a number of reasons:

Pressure rating
Long term properties
Flexibility
Cost



PROJECT 19



- Based on USC Background, the three key employees all come from a brass waterworks company with 100 years experience combined.
Gerry Gunn General Manager , Greg Bell VP of Sales and Jamie Norman CET design specialist.
- For the past few years, we discuss how to get involved in the service fitting business
 - Manufacture
 - Sourcing
 - Manage other brand
- What about, alternative material?
 - * Stainless Steel?
 - * Iron ?
 - * Others?
- With Europe already moving faster on alternative products for water than North America, what do they have to offer?
- Plastics was the number one alternative to gun metal fittings (brass).
- Spain, Israel, United Kingdom, Germany and Australia to name a few, have years of experience using a variety of plastic or plastic type products.
- Bury conditions and climate conditions are very similar to Canada in some of these areas.

PROJECT 19

Why don't we just import fittings from overseas, Europe or elsewhere??

*typically they use a true metric system and same fittings do not fit on our "Metric/Imperial size pipe

*most fittings we review do not meet the robust standard we expect in North American.

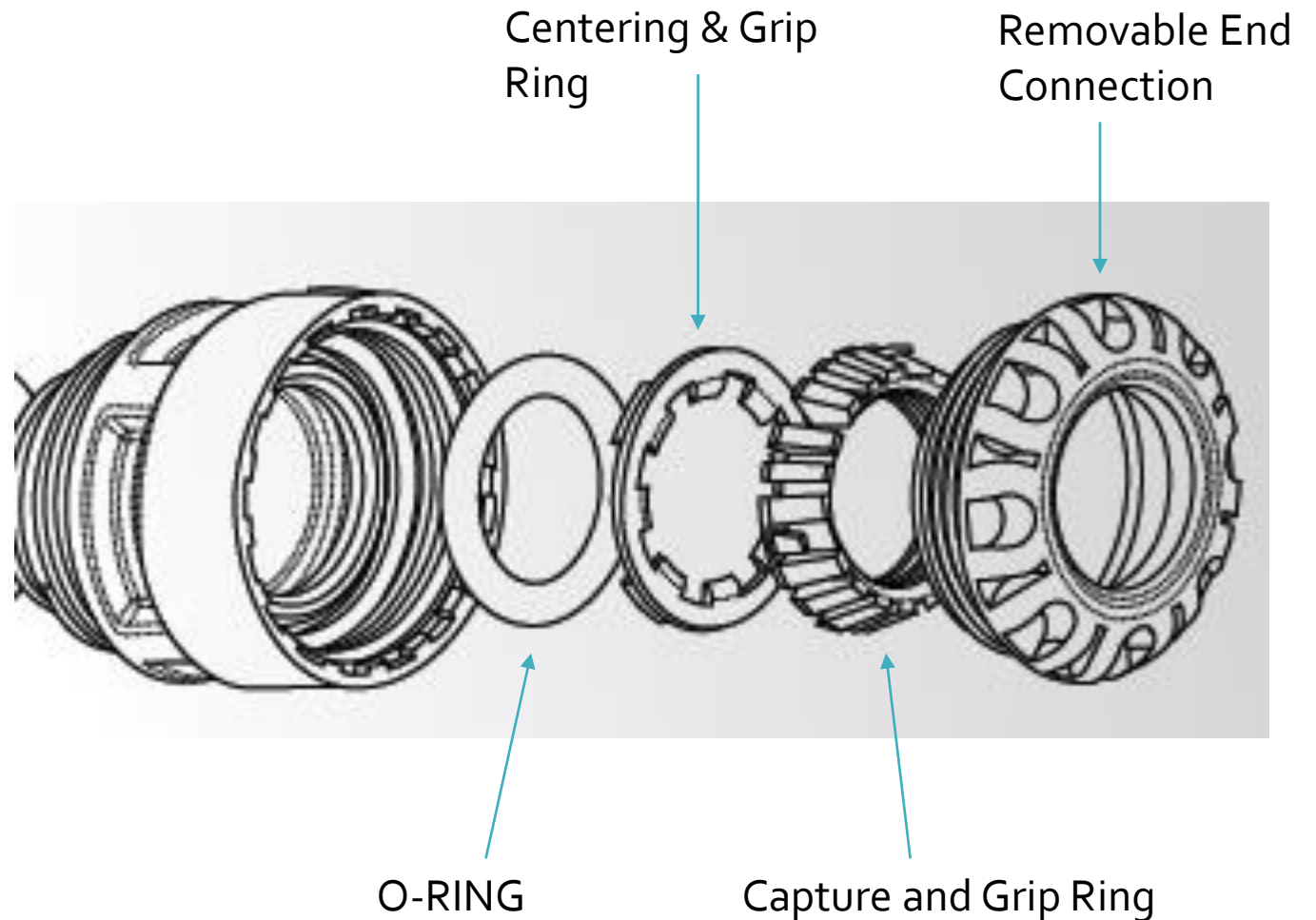
*from experience, plastic compression fittings, a wrench and a contractor are not a good combination.

How do we offer a product that will, be corrosion resistant, easy to work with and meet the requirements of use in the waterworks industry?



MEGATITE

- Over two years of design and testing USC now offers a stab-fit fitting designed for the water industry in North America.
- The Megatite system is design specifically for Plastic Service tubing commonly used in North America with CTS size OD.
- Whether it's a HDPE, PEX or PERT style of pipe, the Megatite performs better than the pipe on pull out tests conducted (with insert).



MEGATITE

Benefits:

- Positive stop stab-fit connection
- Full flow waterway
- Removable end connection
- Suited for all weather conditions

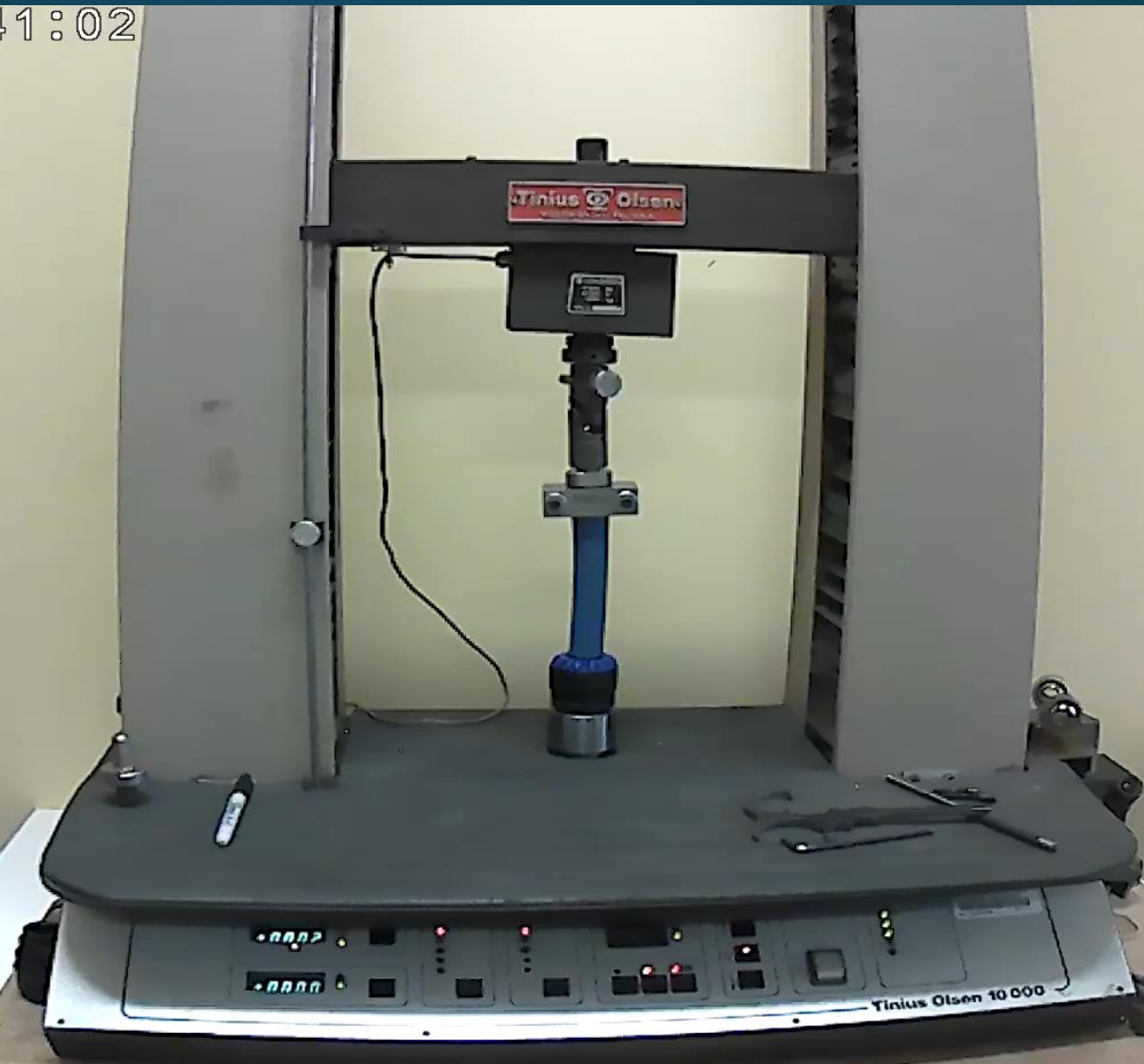


Features:

- All Material in contact with potable water is NSF approved.
- Body is rated for 300 PSI water with a 2 to 1 safety factor.
- Easy to Install and cost effective.
- Lifetime warranty.

MEGATITE

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MEGATITE



- Ball Curbstop

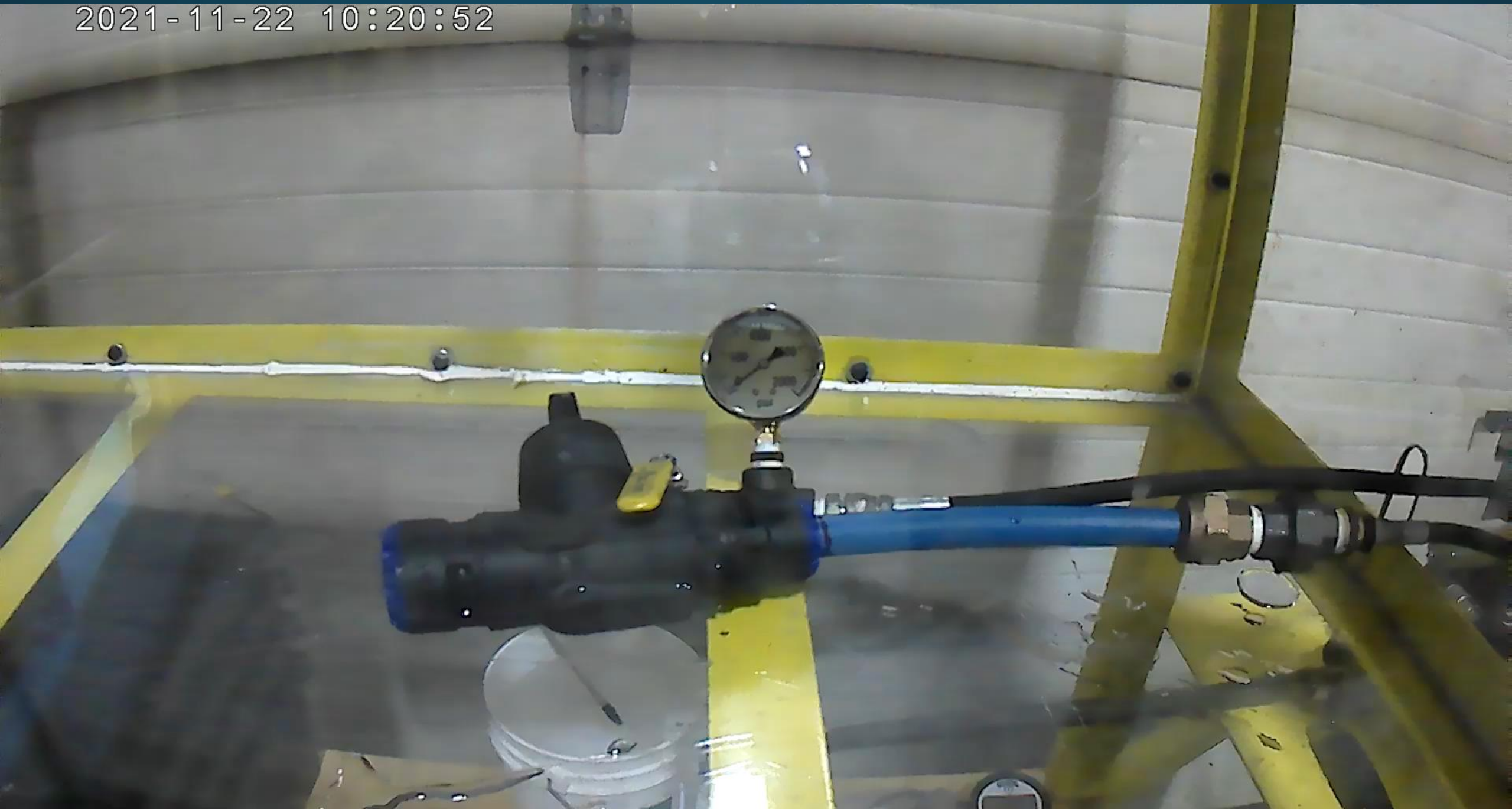
- Megatite end connections have been incorporated for both $\frac{3}{4}$ " & 1" sizes, no need for a wrench.
- Body has been tested up to 1200 PSI, pipe bursts prior to any signs of leaking.
- Non-breakable anti-over rotation Curbstop cap (ratcheting style).
- Easy to installed and can be used with a standard curb box and Rod.



MEGATITE

- Ball Curbstop
- Video test on anti-over rotation operating cap
- Ratcheting effect happens at 20ft lbs. torque
- Connected to the stem by a SS screw with a SS Insert sleeve.

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MEGATITE



- Tapper
- Mainstop and cutter build into one device.
- 304 Stainless Steel Cutter threads and retains the coupon.
- Once pipe is tapped, cutter is retraced to top of tapper and capped.
- Full flow waterway
- Can rotate tapper 360 degrees to line up with service connection.
- Tapper seals on an O-ring design, rather than a taper thread with Teflon tape.
- Service tap comes off the top of the main, rather than the 10 o'clock position.

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- Tapping off the top is not a new concept.
- Gas industry commonly uses this style of tapping device.
- Water companies around the world use this type of design.



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Tapper & Saddle

- Saddle will be installed in the factory to lesson field issues.
- Tapper is 360 rotatable by simply loosening the saddle nut and positioning the tap in the proper direction.
- Saddle is sealed by a large O-ring and factory tested for watertight seal.
- All saddles are 18 gauge 304 SS fully passivated and available from 4" thru 16"



MEGATITE

- Roll out for product line is officially January 1st 2022
- First Connection and valves made for Plastic pipe.
- Tapper, Curbstop and couplings for ¾" & 1" size will be available in January, other products and sizes will follow including meter valves.
- Learning to install Megatite fittings will be offered to all municipal and contractor employees.
- End removal and multi-service tool will be supplied free of charge to all municipalities that specify Megatite fittings.
- Product is patented and trademarked by Utility Supply Corporation.
- All fittings are supplied with a lifetime warranty.



MEGATITE



Features :

- Easy to install, simple 1-2-3 method
- All parts in contact with potable water are made of NSF-61 approved material and will not leach heavy metals into waterway, lead or others.
- Strong cross section design, made for bury application and equal pressure rating to brass ball curbstop of 300 PSI
- Megatite joint is stronger than the pipe used, all pullout test show pipe failure before joint separation.
- Easy to assemble made specifically for CTS size pipe currently used in the market today.
- Anti-rotation (Curbstop) operating cap not allowing the operator to break once turned pass the stops.
- Full flow waterway equal to the tubing used, no internal restrictions.

CUT, MARK & INSERT.



MEGATITE



Benefits Review:

- No heavy metals leaching into the waterway from the fitting.
- Fool proof end connection and removable.
- Tapper design regulates the feed speed of the cutter, not allowing the operator to force the cutter through the pipe
- Cutter is design for 1 use and retains the coupon permanently but treading the coupon.
- All products are designed to make installation easy and simple.
- Fittings are cost effective and readily available at your local wholesaler

QUESTIONS?

For More Information contact:
Greg Bell
1-855-748-4300
gbell@utilitysupplycorp.com