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Title: A Value Added Tapping Option

Triple Tap® by Total Piping Solutions, Inc has hit the market running. This unique hot tapping product is geared towards reducing inventory and simplifying the pipe installer's job. A single size shell eliminates the need to carry multiple sizes within a nominal pipe diameter.

Knowledge of Customer Base

By survey of the market and input of multiple customers, it was determined that hot tapping products should possess the ability to deliver more range and provide greater performance. All tapping devices should typically provide a working pressure of at least 1.5X the working pressure rating of the system, have the ability to provide a full seal in the event of pipe beam breakage during the tapping process, and be designed to accept industry standard tapping valves. Delivering a sleeve with the ability to work on all pipe materials without alteration, including high density polyethylene pipe is essential. Typical pipe materials include ductile iron, gray iron, steel, PVC, HDPE and asbestos cement.

Compliance with Industry Standards

Pipe tapping is performed on both water and sewer lines, consequently, the gasketing material must generally be compatible with all line contents while maintaining NSF 61 compliance for drinking water safety. All products must meet or exceed the ANSI/AWWA Standard C-223-07 for tapping sleeves. At a minimum, flanges must be in accordance with AWWA Class "D", rated at 175 psi, and possess an ANSI Class 150 drilling pattern. Flanged connections should be machined to accept industry standard tapping valves and machined with a tapping valve recess per MSS SP-60.

Inventory Saving Design Delivers on Performance

A primary design goal was to meet customer directed requirements to reduce inventory and simplify the product selection process. The product carries a diameter range of more than double the standard sleeve in use today (with up to nine tenths of an inch), and can be used on a minimum of three classes of pipe per nominal diameter. A key example of this range enhanced ability is shown in the 6" size range. A single 6" Triple Tap can accommodate the following four pipe diameters: 6" steel, 6" ductile, 6" cast iron, 6" Class 150 asbestos cement. This range extension may equate to a warehouse inventory reduction potential of between 50% and 70% by eliminating the need for extra on-hand sizes to accommodate local market requirements for hot tapping.

Heavy Duty Design Provides Added Benefits

To accommodate the range increase, the product has incorporated a heavier shell design allowing for greater pressure retention in the field and on the test bench. A heavier shell also provides additional support of the pipe.

Multiple customers expressed a concern over loss of seal due to beam breakage of the pipe during the tapping process. Beam breakage typically occurs on size on size pipe taps where a maximum amount of pipe wall is removed at the tap location. Since up to 55% of the pipe wall can be removed during the tapping process, the pipe can weaken and crack opposite the tap location. The breakage, commonly known as a beam break, creates a leak point on the backside of the tapping sleeve after the tap is performed.

Engineers at Total Piping Solutions, Inc. were able to solve the issue of beam breakage by combining the heavier shell design with a patented gasketing system. The unique sealing system prevents leakage from a beam break, and allows for greater working pressures. By combining both a proprietary aperture seal, and an opposing seal bead system on both the upper and lower shells, beam break leakage is fully contained. Each and every product possess the ability to exceed utility required test pressures in excess of one and one half times(1.5X) the rated working pressure of the product. Test pipes were

specifically designed to simulate a beam break, and incorporate a 1/8" wide by 3/16" deep hydrostatically pressurized groove. All products passed complete proof of design tests under the worst of conditions.

Providing Total Value

The Triple Tap has proven itself to be a winning product in the hot tapping industry by helping to reduce inventory, speeding up installation, and performing to a higher standard. Triple Tap can be used on High Density Polyethylene pipe without sleeve modification. And, all hot tapping products produced by Total Piping Solutions, Inc. exceed pertinent AWWA and other industry applicable standards.

