Welding and Hot Tapping Procedures for Concrete Cylinder (300 psi or Less)

The hot tapping procedure is a means of permanently adding an outlet to an existing system without a disruption of service. The O.D. of the existing line and the operating pressure shall be submitted to the offices of International Flow Technologies, Inc. at the time of scheduling.

Pipe coating shall be removed and existing pipeline wire wheeled to remove corrosion. Welded hot taps can be performed through a thread-o-let or a flanged fitting.

Fire watch, with smoke and fire protection need to be arranged through the general contractor prior to IFT beginning work.

The weld fitting is set and leveled on the existing pipe, and is to be pulled tight against pipeline; the position, 2-hole or level, must be confirmed. All four cross points must be heavily tacked so weld fitting will not “walk” during welding. When above details are confirmed welding can begin.

Flanged Weld-Nozzle must first be welded to pipeline to ensure a proper pressure test can be performed. This also acts as a seal so that water does not leak by between the wrapper and the pipe, as a rubber gasket would in the case of a bolt-on fitting. A minimum of two passes are required both for the nozzle and the wrapper.

Once flanged nozzle is welded to pipe, a full wrap fitting should be placed and tightened to pipeline. The full wrap fitting, again, should be heavily tacked to avoid “walking” during the welding procedure. Only the outside of the full wrap fitting is to be welded.

When welding is completed, allow to cool for approximately 15 minutes. Do not spray fitting with liquid when hot, as the metal will become tampered and the tap will be extremely hard to complete.

Once welding is complete, and checked for leaks, the tapping valve shall be installed and bolts shall be tightened in a star alternate pattern so valve will mount flush. At this time the tapping machine will be installed and the weld-o-let, tapping valve, and tapping machine will be pressure tested at the same working pressure of the line or a minimum of 25 psi, using CO2 and soapy water; a hydrostatic test can be performed instead, if situation warrants.
After a successful seal is confirmed the tapping cutter will be advanced forward and the pipe hot tapped. Care is to be used in retrieving the cut section or "coupon" by using a retention device on the pilot drill.

Tapping can be performed while system is pressurized.

When the hot tap is completed, the "cookie" or cut portion of the pipe, which is normally retained by the pilot drill wires, is lifted out and the valve is closed. The valve is now ready to be used for the branch connection.