PWPipe

TECHNICAL BULLETIN

INSTALLATION **TB-I3**

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Pipe Transitions Between Ductile Iron and AWWA C900/C905 PVC Pipe

At times, it is necessary to transition between AWWA C900/C905 PVC pipe and ductile iron pipe. Both materials have the same outside diameters based upon cast iron pipe size or CIPS. Since the outside diameters are the same, it follows that the spigot of one pipe should fit into the bell of the other. However, there are factors which must be considered when doing this.

- Ductile iron pipe has shorter bell sockets than PVC.

  When inserting a PVC spigot into a ductile iron bell, the spigot cannot be inserted to the insertion line as with a typical PVC joint.

- The outside diameter of field-cut ductile iron pipe may vary.

  When inserting the ductile iron spigot into the PVC bell this could create either:

  a. An unassemblable joint due to too large an outside diameter, or

  b. A loose or sloppy fit caused by too small an outside diameter.

- Ductile iron pipe has a smaller bevel than PVC pipe.

  When inserting a ductile iron spigot into a PVC bell, the relatively blunt edge of the spigot increases the probability of dislodging the rubber gasket during assembly. Straight alignment of the pipe is essential in assuring that the gasket does not become dislodged. The use of mechanical means to make the joint is discouraged due to the ease of damaging the gasket.

Transition couplings are also available from fitting manufacturers that provide watertight joints between PVC and ductile iron pipes.