(2) Removable and non-removable push-fit fittings that employ a quick assembly push-fit connector shall comply with ASSE 1061 or equivalent International Standard(s) approved by the Authority Having Jurisdiction.

Mechanical joints shall be installed in accordance with the manufacturer's instructions.

605.3 PE Plastic Pipe/Tubing and Joints. PE plastic pipe/tubing and fittings joining methods shall comply with the following:

(1) Heat-fusion joints between PE pipe/tubing and fittings shall comply with ASTM D2657 or equivalent International Standard(s) approved by the Authority Having Jurisdiction and shall be assembled using butt, socket, and electro-fusion heat methods.

Butt-fusion joints shall be made by heating the squared ends of two pipes, pipe and fitting, or two fittings by holding ends against a heated element. The heated element shall be removed where the proper melt is obtained and joined ends shall be placed together with applied force. Butt-fusion joints shall be installed in accordance with the manufacturer's instructions.

Socket-fusion joints shall be made by simultaneously heating the outside surface of a pipe end and the inside of a fitting socket. Where the proper melt is obtained, the pipe and fitting shall be joined by inserting one into the other with applied force. The joint shall fuse together and remain undisturbed until cool. Socket-fusion joints shall be installed in accordance with the manufacturer's instructions.

Electro-fusion joints shall be made by embedding the resistance wire in the fitting and supplying with a heat source. Pipe shall be clamped in place and power applied through a controlled processor. The material surrounding the wire shall be melted along with the pipe and shall provide the pressure required for fusion. Electro-fusion joints shall be installed in accordance with the manufacturer's instructions.

(2) Mechanical joints between PE pipe/tubing and fittings shall include insert and mechanical compression fittings that provide a pressure seal resistance to pullout. Joints for insert fittings shall be made by cutting the pipe square, using a cutter designed for plastic piping and removal of sharp edges. Two stainless steel clamps shall be placed over the end of the pipe. Fittings shall be checked for proper size based on the diameter of the pipe. The end of pipe shall be placed over the barbed insert fitting, making contact with the fitting shoulder. Clamps shall be positioned equal to 3.1 of a radian (180 degrees) apart and shall be tightened to provide a leak-tight joint.

Compression-type couplings and fittings shall be permitted for use in joining PE piping and tubing. Stiffeners that extend beyond the clamp or nut shall be prohibited.

Bends shall be not less than 30 pipe diameters, or the coil radius where bending with the coil. Bends shall not be permitted closer than 10 pipe diameters of any fitting or valve.

Mechanical joints shall be designed for their intended use and shall be installed in accordance with the manufacturer's instructions.

605.4 PE-AL-PE Plastic Pipe/Tubing and Joints. PE-AL-PE plastic pipe/tubing and fittings joining methods shall comply with the following:

Mechanical joints for PE-AL-PE pipe/tubing and fittings shall be either of the metal insert fittings with a split ring and compression nut or metal insert fittings with copper crimp rings. Such joints shall comply with ASTM F1974, CSA B137.9 or equivalent International Standard(s) approved by the Authority Having Jurisdiction and in accordance with the manufacturer's instructions.

Crimp insert fittings shall be joined to the pipe by the placing the copper crimp ring around the outer circumference of the pipe, forcing the pipe material into the space formed by the ribs on the fitting until the pipe contacts the shoulder of the fitting. The crimp ring shall then be positioned on the pipe so the edge of the crimp ring is 3mm to 6mm (0.125 - 0.25 in.) from the end of the pipe. The jaws of the crimping tool shall be centered over the crimp ring and tool perpendicular to the barb. The jaws shall be closed around the crimp ring and shall not be crimped more than once.

Compression joints for PE-AL-PE pipe/tubing and fittings shall be joined through the compression of a split ring, by a compression nut around the circumference of the pipe. The compression nut and split ring shall be placed around the pipe. The ribbed end of the fitting shall be inserted onto the pipe until the pipe contacts the shoulder of the fitting. Position and compress the split ring by tightening the compression nut onto the insert fitting.

605.5 PEX Plastic Tubing and Joints. PEX plastic tubing and fittings joining methods shall comply with the following:

Mechanical joints between PEX tubing and fittings shall include mechanical and compression-type fittings and insert fittings.

Mechanical cold expansion fittings shall be joined to PEX tubing in accordance with ASTM F1960, ASTM F2080, CSA B137.5 or equivalent International Standard(s) approved by the Authority Having Jurisdiction. Such joints shall be made by first expanding the end of the pipe with the expander tool, inserting the cold-expansion fitting into the expanded