

PROCEDURES

PLASTIC PIPE / GENERAL

1.0 PURPOSE (192.271-192.287)

It is the purpose of this section to provide minimum requirements and information on the equipment, materials and methods utilized in the fabrication of plastic gas pipe and tubing.

1.1 SCOPE

This section deals only with polyethylene plastic pipe. This section covers the following:

- A. Handling and care of polyethylene pipe
- B. Joining of polyethylene pipe and related fittings
- C. Risers used with polyethylene plastic pipe
- D. Controlling gas flow in polyethylene plastic pipe
- E. Repair of Polyethylene Pipe
- F. Use of mechanical fittings on polyethylene pipe
- G. Static Discharge / Pinholing

1.2 GENERAL

Polyethylene plastic pipe is currently the most commonly used plastic pipe throughout the gas industry. PVC, ABS, and some other pipe materials exist in gas operating systems however these materials are no longer recommended for use in new or replacement systems.

New plastic pipes, including PA 11, are still under development and review by the industry. Use of this pipe does currently require a written waver from the applicable State regulatory body.

Individuals performing plastic pipe joining including fusion, mechanical, or other means shall be qualified in the procedure to be utilized, or must be under the direct observation of a qualified individual. For this procedure this means in a direct line of site in order that the qualified individual may recognize any abnormal conditions and immediately intercede.

1.3 JOINING (192.271 – 192.287)

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- A. Individuals performing polyethylene pipe joining must be qualified in the procedure being utilized or directly observed by an individual that is qualified. Individuals must be requalified if during any 12 month period there are no fusions made or has 3 joints or 3% of the joints made that are unacceptable.
- B. Pipe and fitting surfaces must be clean and properly prepared.
- C. Heating tool surfaces must be clean, undamaged and at the correct surface temperature.
- D. Plastic pipe shall be joined utilizing one of the following procedures specified in this **Section C** of this manual.
- E. Plastic pipe and fusion fittings shall be polyethylene 2406, ASTM D2513 medium density.

1.4 **MARKING**

- A. Each joint in a plastic pipe system shall be marked to identify the qualified individual performing the procedure, using their designated unique identifier.
- B. Care shall be exercised in marking the pipe joint as not to damage the pipe. The following are acceptable marking instruments:
 - Sanford Sharpies
 - Sanford “Gold Coat” slim tip metallic marker
 - Sanford “Silver Coat” slim tip metallic marker

1.5 **MAIN TEMPERATURE**

DOT regulated gas applications in the United States; main pressure must be reduced for elevated temperature when the main temperature exceeds 100°F (38°C).

1.6 **STATIC DISCHARGE / PINHOLING**

The buildup and discharge of static electricity inside and on the outside of plastic pipe is of significant concern and may lead to future pipeline integrity.

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- A. Pinholing may be the result of static discharge such as during purging, or
- B. May be due to a material defect.
- C. Caution and continuing surveillance of the plastic distribution system for signs of possible pinholing and resulting leakage shall be maintained by the operator.