



PROCESS
INDUSTRY
PRACTICES

COMPLETE REVISION
October 2024

Piping

PIP PNSC0036
High Density Polyethylene (HDPE)
Piping Installation Specification

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PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

This Practice has been prepared by harmonizing technical requirements from existing standards of major industrial operators, contractors, and standards development organizations. While this Practice is intended to incorporate the majority of requirements, individual applications may have requirements which take precedence over this Practice. Determinations concerning fitness for purpose or application of this Practice to specific project or engineering situations should not be made solely on information contained in this Practice. All Practices are intended to be consistent with applicable laws and regulations. Should this Practice conflict with applicable laws or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by this Practice.

Use of trade names should not be viewed as an expression of preference. Other brands having the same specifications are equally correct and may be substituted for those named.

This Practice is subject to revision at any time. For more information refer to PIP ADG001, *Specification for Developing Practices*.

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1. Scope

This Practice describes the requirements for purchasing, fabrication, installation, examination, and testing of general purpose, high-density polyethylene (HDPE) piping and Factory Mutual (FM) approved piping.

2. References

Applicable parts of the following industry codes and standards should be considered an integral part of this Practice. The edition in effect on the date of contract award should be used, except as otherwise noted. Short titles will be used herein where appropriate.

Industry Codes and Standards

- American Society of Mechanical Engineers (ASME)
 - ASME B31.3 - *Process Piping*
- American Society for Testing and Materials (ASTM)
 - ASTM F1668 - *Standard Guide for Construction Procedures for Buried Plastic Pipe*
 - ASTM D2774 - *Standard Practice for Underground Installation of Thermoplastic Pressure Piping*
 - ASTM F2620 - *Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings*
 - ASTM F2634 - *Standard Test Method for Laboratory Testing of Polyethylene (PE) Butt Fusion Joints using Tensile-Impact Method*
- National Fire Protection Association (NFPA)
 - NFPA 24 - *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*
- Plastic Pipe Institute (PPI)
 - PPI - *Handbook of Polyethylene Pipe*
 - PPI TN-38 - *Polyethylene Flanged Joints*
 - PPI TR-33 - *Generic Butt Fusion Joining Procedure for Field Joining of Polyethylene Pipe*
 - PPI TR-41 - *Generic Saddle Fusion Joining Procedure for Polyethylene Gas Piping*

3. Definitions

manufacturer: Party responsible for making the HDPE pipe and fittings

owner: Party who owns facility wherein the HDPE piping will be used

purchaser: Party who awards contract to supplier. Purchaser may be owner or owner's authorized agent.

supplier: Party responsible for purchasing and installing the HDPE piping