

Specification for Crosslinked Polyethylene (PEX) Line Pipe

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Specification for Crosslinked Polyethylene (PEX) Line Pipe

1 Introduction

1.1 Purpose

The purpose of this specification is to provide standards for crosslinked polyethylene (PEX) line pipe suitable for use in conveying oil, gas, and nonpotable water in underground, aboveground, and reliner applications for the oil- and gas-producing industries.

This specification does not address all of the safety concerns associated with the design, installation, or use of products suggested herein. It is the responsibility of the user of this specification to make appropriate health and safety considerations.

All pipe produced under this specification use pressure-rated materials used in pressurized, non-pressure, and negative pressure applications.

The technical content of this document provides requirements and guidelines for performance, design, materials inspection, dimensions and tolerances, marking, handling, storing, and shipping.

1.2 Scope

This specification covers PEX line pipe used for the production and transportation of oil, gas, and nonpotable water. This specification does not cover pipe for chlorinated water service. The piping is intended for use in new construction, structural pressure-rated liner, line extension, and repair of both aboveground and buried-pipe applications. Equipment covered by this specification is listed as follows:

- a) PEX line pipe;
- b) fittings;
- c) metallic flange couplers for field installations and PEX face flanges used as internal diameter adapters.

1.3 Service Conditions

The standard service conditions for the API 15PX standard pressure rating are as follows:

- a) non-chemically-aggressive fluids;
- b) operating temperature range: $-50\text{ }^{\circ}\text{C}$ ($-58\text{ }^{\circ}\text{F}$) to $93\text{ }^{\circ}\text{C}$ ($200\text{ }^{\circ}\text{F}$) or $95\text{ }^{\circ}\text{C}$ ($203\text{ }^{\circ}\text{F}$), depending on design methodology (Section 4).

NOTE Applications above $95\text{ }^{\circ}\text{C}$ ($203\text{ }^{\circ}\text{F}$) require special design consideration; service conditions other than the standard API 15PX conditions and their effects on design are discussed in Section 4.

2 Normative References

This specification includes by reference, either in total or in part, the most current issue of the following standards:

API Q1, *Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry*

API 1104, *Standard for Welding Pipelines and Related Facilities*