



Standard Specification for Factory Assembled Anodeless Risers and Transition Fittings in Polyethylene (PE) Fuel Gas Distribution Systems¹

This standard is issued under the fixed designation F 1973; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers requirements and test methods for the qualification of factory assembled anodeless risers and transition fittings, in sizes through NPS 8, for use in polyethylene (PE) gas distribution systems.

1.2 The test methods described are not intended to be routine quality control tests.

1.3 The values given in parentheses are for informational purposes only.

1.4 Throughout this specification footnotes are provided for informational purposes and shall not be considered as requirements of this specification.

2. Referenced Documents

2.1 ASTM Standards:

- A 53 Specification for Welded and Seamless Steel Pipe²
- A 513 Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing²
- D 638 Test Method for Tensile Property of Plastics³
- D 1600 Abbreviations of Terms Relating to Plastics³
- D 2513 Specification for Thermoplastic Gas Pressure Pipe, Tubing and Fittings⁴
- E 515 Test Method for Leaks Using Bubble Emission Techniques⁵
- F 412 Definitions of Terms Relating to Plastic Piping Systems⁴
- F 1588 Test Method for Constant Tensile Load Joint Test (CTLJT)⁴

2.2 US Government Document:

United States Code of Federal Regulations Title 49 Part 192⁶

2.3 ANSI Standards:

ANSI B 31.8 Gas Transmission and Distribution Piping Systems⁷

ANSI/ASME B1.20.1 Pipe Threads, General Purpose (inch)⁷

ANSI B 16.5 Steel Pipe Flanges, Flanged Fittings⁷

2.4 ASME Standard:

ASME Boiler and Pressure Vessel Code⁸

2.5 API Standard:

API 1104 Standard for Welding Pipelines and Related Facilities⁹

2.6 UL Standard:

UL 360 Flexible Metal Hose¹⁰

2.7 PPI Standard:

PPI TR-4 Hydrostatic Design Bases and Maximum Recommended Design Stresses for Thermoplastic Piping Materials¹¹

3. Terminology

3.1 The gas industry terminology used in this specification is in accordance with ANSI B31.8 or the United States CFR 49 Part 192, unless otherwise indicated.

3.1.1 The term “pipe” used herein refers to both “pipe” and “tubing” unless specifically stated otherwise.

3.1.2 The term “gas” used herein refers to any fuel gas unless specifically stated otherwise.

3.2 *Definitions*—Definitions are in accordance with Definitions F 412 unless otherwise specified. Abbreviations are in accordance with Abbreviations D 1600 unless otherwise specified.

3.2.1 *anodeless flex riser casing*—a flexible, plastic coated, metallic, non-gas carrying, protective outer sleeve portion of an anodeless riser which is sometimes selected as an alternate to rigid riser casings.

3.2.2 *anodeless riser*—a type of transition fitting which is designed to transport gas from an underground polyethylene service line to above-ground steel piping. In an anodeless riser polyethylene pipe is always the gas carrier, at least, in the below ground section.

¹ This specification is under the jurisdiction of ASTM Committee F-17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.60 on Gas. Current edition approved May 10, 1999. Published August 1999.

² Annual Book of ASTM Standards, Vol 01.01.

³ Annual Book of ASTM Standards, Vol 08.01.

⁴ Annual Book of ASTM Standards, Vol 08.04.

⁵ Annual Book of ASTM Standards, Vol 03.03.

⁶ Available from Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

⁷ Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY 10036.

⁸ Available from ASME, Three Park Ave., Codes & Standards, New York, NY 10016.

⁹ Available from American Petroleum Institute, 1220 L St., NW, Washington, DC 20005.

¹⁰ Available from Underwriters Laboratories, 333 Pfingsten Rd., Northbrook, IL 60062.

¹¹ Available from Plastics Pipe Institute, Inc., 1825 Connecticut Ave., NW, Suite 680, Washington, DC 20009.