Designation: F 1335 – 04

An American National Standard

Standard Specification for Pressure-Rated Composite Pipe and Fittings for Elevated Temperature Service[1]

This standard is issued under the fixed designation F 1335; 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 pressure-rated composite pipe and fittings for the transport of hot or cold liquids, beverages, or gases that are compatible with the composite pipe and fittings.

1.2 Composite pipe is produced using a butt welded aluminum pipe as a core, with an extruded inside layer of crosslinked polyethylene (PEX) or polyethylene (PE). An adhesive layer is used to bond the inside layer to the wall of the aluminum pipe. An outer layer of polyethylene (PE) and an adhesive layer are extruded to the outer wall of the aluminum pipe.

1.3 Composite pipe is produced in four configurations and referenced in Fig. 1, as Classes 1, 2, 3, and 4 composite pipe.

1.4 This specification includes compression fittings and compression joints, which are referenced in Fig. 2. Compression fittings as described in this specification are not compatible for gas transportation. Threaded fittings are referenced in Fig. 3.

1.5 The following precautionary caveat pertains only to the test method portion of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.6 The values stated in acceptable SI units are to be regarded as the standard. The values given in parentheses are provided for information only. The values stated in each system are not exact equivalents, therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the specification.

2. Referenced Documents

2.1 *ASTM Standards:* [2]

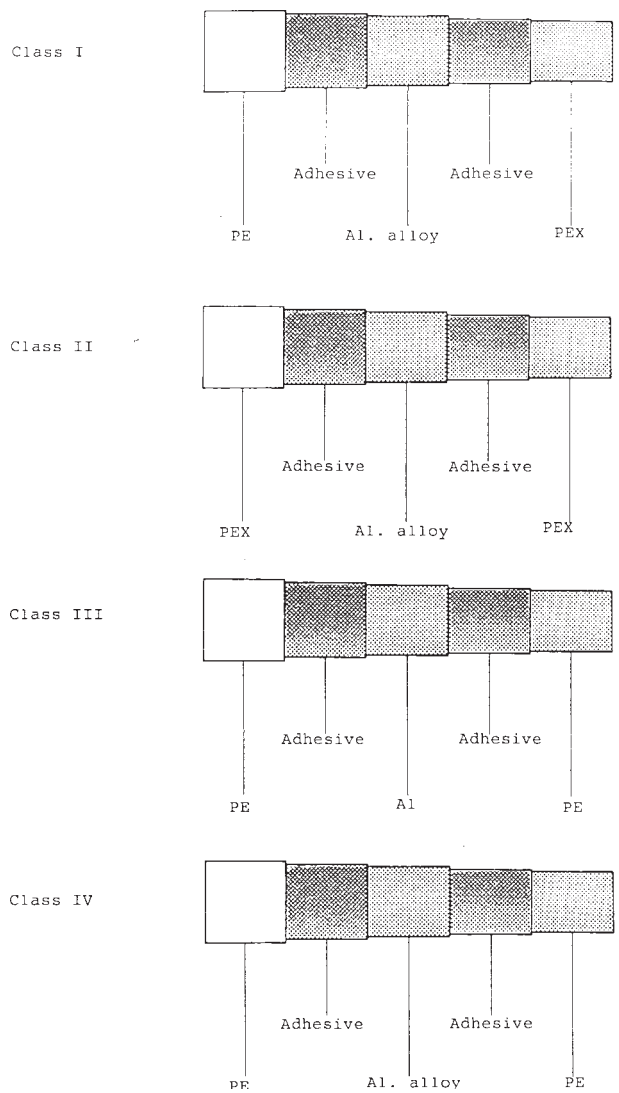

FIG. 1 Composite Pipe Composition

B 283 Specification for Copper and Copper-Alloy Die Forgings (Hot-Pressed)

B 313/B 313M Specification for Aluminum and Aluminum-Alloy Round Welded Tubes

B 547/B 547M Specification for Aluminum and Aluminum-Alloy Formed and Arc-Welded Round Tube

[1] This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.11 on Composite.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

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