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Standard Specification for Laminated-Wall Bituminized Fiber Drain and Sewer Pipe¹

This standard is issued under the fixed designation D 1862; 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.

This specification has been approved for use by agencies of the Department of Defense to replace Federal Specification SS-P-1540B, Type II and for listing in the DoD Index of Specifications and Standards.

1. Scope

1.1 This specification covers laminated-wall bituminized fiber drain and sewer pipe for use in the nonpressure conveyance of sewage, industrial waste water, and storm water.

1.2 The values stated in SI units are to be regarded as the standard.

2. Referenced Document

- 2.1 *ASTM Standard:*
D 2315 Methods of Testing Laminated-Wall Bituminized Fiber Pipe²

3. Materials and Manufacture

3.1 *Pipe and Couplings*—Pipe and couplings shall be composed of a multi-ply laminated convolute or spiral fibrous structure, with the laminations being adhered with a heat and water-resistant adhesive and then thoroughly impregnated with a bituminous compound. The pipe shall have a smooth interior surface free of obstructions and rough or flaky areas. Bends, fittings, and adapters shall be of the same material as the pipe, or of a material having equal or better physical and chemical properties.

3.2 *Fittings*—Where fittings furnished are of other materials, such as cast iron or steel, they shall conform to any applicable ASTM specifications for such materials.

4. Physical and Chemical Requirements

4.1 Pipe and couplings shall meet the physical requirements prescribed in Table 1.

4.2 *Joint Tightness*—Any minor leakage at the joint shall have stopped by the end of a 24-h period.

4.3 *Longitudinal Permeability*—Any minor leakage of water from the ends of the pipe shall have stopped after 1 h.

4.4 *Water Absorption*—The maximum water absorption shall be 2 % of the original weight.

4.5 *Boiling Water Resistance*—Specimens shall exhibit not less than 90 % of the crushing strength prescribed in Table 1.

4.6 *Heat Resistance*—The heat shall not cause a weight loss over 1 % in the specimen due to exudation of the impregnant.

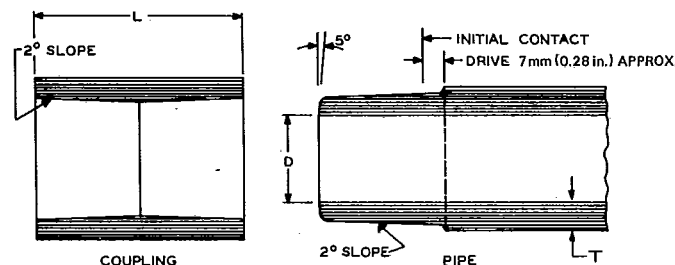


FIG. 1 Dimensions of Taper Joint for Pipe and Couplings

4.7 *Chemical Resistance*—Specimens shall show no visible sign of chemical reaction or deterioration of the impregnant.

4.8 *Kerosine Resistance*—Specimens shall meet the crushing strength requirements prescribed in Table 1.

5. Dimensions

5.1 *Pipe and Couplings*—Dimensions shall conform to those prescribed in Fig. 1 and Table 3.

5.2 *Five-Degree Angle Couplings*—Dimensions shall conform to those prescribed in Fig. 2 and Table 3.

5.3 *Bore*—The bore shall be straight and circular in cross-section as determined by passing a 1-m (40-in.) long mandrel 6.4 mm ($\frac{1}{4}$ in.) smaller in diameter than the minimum inside diameter of the pipe, freely through the pipe.

5.4 *Length*—Lengths other than standard shall be in increments of 152 mm (6 in.) from standard, and unless otherwise specified, up to 20 % short lengths may be supplied in a shipment. No lengths shorter than 1.2 m (4 ft) shall be furnished, with no more than two different short lengths in any one shipment.

6. Sampling

6.1 From each lot to be tested or fraction thereof representing a product of the same size, select at random a

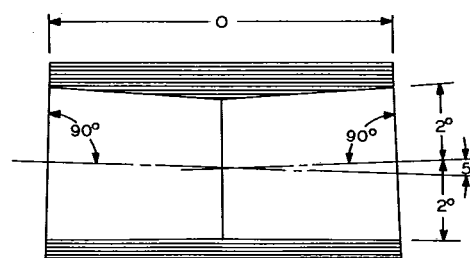


FIG. 2 Dimensions of Five-Degree Angle Couplings

¹ This specification is under the jurisdiction of ASTM Committee D-8 on Roofing, Waterproofing, and Bituminous Materials and is the direct responsibility of Subcommittee D08.16 on Bituminized Fiber Pipe.

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² *Annual Book of ASTM Standards*, Vol 04.04.