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Standard Methods of Testing LAMINATED-WALL BITUMINIZED FIBER PIPE¹

This standard is issued under the fixed designation D 2315; 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 These methods cover the physical testing of laminated-wall, bituminized fiber pipe.

1.2 The test methods appear in the following order:

	Sections
Resistance to Flattening	4 to 8
Dry Crushing Strength	9 to 14
Wet Crushing Strength	15 to 20
Axial Compression Crushing Strength	21 to 25
Crushing Strength of Couplings	26 to 29
Beam Strength	30 to 35
Joint Tightness	36 to 38
Longitudinal Permeability	39 to 42
Water Absorption	43 to 48
Boiling Water Resistance	49 to 53
Heat Resistance	54 to 57
Chemical Resistance	58 to 60
Kerosine Resistance	61 to 64

1.3 *This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of whoever uses this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Purity of Water

2.1 Use distilled, demineralized, or rain water, except in cases where tap water may be used if it is known that such will not affect the results.

3. Conditioning

3.1 Condition specimens for crushing strength (dry and of couplings), beam strength, axial compression strength, and longitudinal permeability, immediately before testing, for not less than 24 h at a temperature of 21 to 24°C (70 to 75°F).

RESISTANCE TO FLATTENING

4. Significance

4.1 This test measures the quality of the fiber preform.

5. Test Specimens

5.1 Accurately and cleanly saw from the pipe two test specimens 76 mm (3 in.) in length and measure the inside diameter. Mark the points at which measurements are taken for identification.

6. Procedure

6.1 Place the specimens in an oven on a common flat base with their axes parallel, and with the measured diameter in a vertical direction (see Fig. 1). Bridge the specimens symmetrically with a flat plate, and symmetrically load the plate with the required load. Maintain the oven at $66 \pm 1^\circ\text{C}$ ($150 \pm 2^\circ\text{F}$) for 48 h. At the end of 48 h, unload the two pieces, remove from the oven, and allow to cool for at least 1 h at 21 to 24°C (70 to 75°F) in air, after which measure the inside diameters again between the original marks.

7. Report

7.1 Report the change in diameter as a percentage of the original diameter.

8. Precision

8.1 Acceptability of results (95 % probability)

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

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