Designation: F1743 – 08 (Reapproved 2016)

Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place Thermosetting Resin Pipe (CIPP)[1]

This standard is issued under the fixed designation F1743; 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 practice describes the procedures for the reconstruction of pipelines and conduits (4 to 96 in. (10 to 244 cm) diameter) by the pulled-in-place installation of a resin-impregnated, flexible fabric tube into an existing conduit and secondarily inflated through the inversion of a calibration hose by the use of a hydrostatic head or air pressure (see Fig. 1). The resin is cured by circulating hot water or by the introduction of controlled steam into the tube. When cured, the finished cured-in-place pipe will be continuous and tight fitting. This reconstruction process may be used in a variety of gravity and pressure applications such as sanitary sewers, storm sewers, process piping, electrical conduits, and ventilation systems.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

NOTE 1—There are no ISO standards covering the primary subject matter of this practice.

1.3 *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.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D543 Practices for Evaluating the Resistance of Plastics to Chemical Reagents

D638 Test Method for Tensile Properties of Plastics

D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

D903 Test Method for Peel or Stripping Strength of Adhesive Bonds

D1600 Terminology for Abbreviated Terms Relating to Plastics

D1682 Test Method for Breaking Load and Elongation of Textile Fabric[3]

D3039/D3039M Test Method for Tensile Properties of Polymer Matrix Composite Materials

D3567 Practice for Determining Dimensions of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting Resin) Pipe and Fittings

D4814 Specification for Automotive Spark-Ignition Engine Fuel

D5813 Specification for Cured-In-Place Thermosetting Resin Sewer Piping Systems

E797 Practice for Measuring Thickness by Manual Ultrasonic Pulse-Echo Contact Method

F412 Terminology Relating to Plastic Piping Systems

F1216 Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

2.2 *AWWA Standard:*[4]

M28 Manual on Cleaning and Lining Water Mains[4]

2.3 *NASSCO Standard:*[5]

Recommended Specifications for Sewer Collection System Rehabilitation

3. Terminology

3.1 *General*—Definitions are in accordance with Terminology F412. Abbreviations are in accordance with Terminology D1600, unless otherwise indicated.

[1] This practice is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.67 on Trenchless Plastic Pipeline Technology.

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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.

[3] Withdrawn. The last approved version of this historical standard is referenced on www.astm.org.

[4] Available from American Water Works Association (AWWA), 6666 W. Quincy Ave., Denver, CO 80235, http://www.awwa.org.

[5] Available from the National Association of Sewer Service Companies, NASSCO 11521 Cronridge Drive, Suite J Owings Mills, MD 21117, http://www.nassco.org.

***A Summary of Changes section appears at the end of this standard**

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