Designation: F2599 – 06

Am American National Standard

Standard Practice for The Sectional Repair of Damaged Pipe By Means of An Inverted Cured-In-Place Liner[1, 2]

This standard is issued under the fixed designation F2599; 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 covers requirements and test methods for the sectional cured-in-place lining (SCIPL) repair of a pipe line (4 in, through 60 in.) by the installation of a continuous resin-impregnated-textile tube into an existing pipe by means of air or water inversion and inflation. The tube is pressed against the host pipe by air or water pressure and held in place until the thermo set resins have cured. When cured, the sectional liner shall extend over a predetermined length of the host pipe as a continuous, one piece, tight fitting, corrosion resistant and verifiable non-leaking cured-in-place pipe.

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

1.3 There is no similar or equivalent ISO Standard.

1.4 *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. Particular attention is drawn to those safety regulations and requirements involving entering into and working in confined spaces.*

2. Referenced Documents

2.1 *ASTM Standards:*[3]

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

D1600 Terminology for Abbreviated Terms Relating to Plastics

D3681 Test Method for Chemical Resistance of "Fiberglass" (Glass–Fiber–Reinforced Thermosetting-Resin) Pipe in a Deflected Condition

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

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 *NASSCO Guidelines:*[4]

Recommended Specifications for Sewer Collection System Rehabilitation.

3. Terminology

3.1 *Definitions:*

3.1.1 Unless otherwise indicated, definitions are in accordance with Terminology F412, and abbreviations are in accordance with Terminology D1600.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *access point*, *n*—upstream or downstream manholes, that serve as the point of entrance or exit for the liner assembly into the existing pipe.

3.2.2 *bladder*, *n*—a translucent plastic apparatus that when pressurized, causes the tube to be inverted through the damaged pipe section and pressed against the pipe walls. The bladder joined with the tube creates a liner/bladder assembly.

3.2.3 *frangible connection*, *n*—a joining or combining of two objects that can be easily disconnected or separated by means of force.

3.2.4 *inversion*, *n*—the process of turning the resin-impregnated tube inside out by the use of air or water pressure.

3.2.5 *launcher*, *n*—an elongated flexible pressure vessel (hose apparatus) with one open end and one closed end capable of receiving air pressure to cause a liner/bladder assembly to invert forward out from the launcher.

3.2.6 *lift*, *n*—a portion of the cured liner that has cured in a position such that it has pulled away from the existing pipe wall.

[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] The sectional repair of damaged pipe by means of inversion of a cured in place liner is covered by patents (LMK Enterprises, Inc. 1779 Chessie Lane, Ottawa, IL 61350). Interested parties are invited to submit information regarding the identification of acceptable alternatives to this patented item to the Committee on Standards, ASTM Headquarters, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. Your comments will receive careful consideration at a meeting of the responsible technical committee which you may attend.

[3] 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.

[4] NASSCO, 1314 Bedford Avenue, Suite 201, Baltimore, MD 21208