



Standard Practice for Sealing of Sewers Using Chemical Grouting¹

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^{ε1} NOTE—Editorial changes were made throughout in May 2016.

1. Scope

1.1 This practice describes the procedures for testing and sealing individual sewer pipe joints with appropriate chemical grouts using the packer method. Sewer systems shall include sanitary, storm, and combined and their appurtenances. Chemical grouting is a soil sealing process, which seals the voids within the soil surrounding the exterior of the pipe at the point of leakage. Chemical grouting is not considered a structural repair.

1.2 This practice applies to sewers 6 to 42 in. (18 to 107 cm) in diameter. Larger diameter pipe may be grouted with specialized packers or man entry methods. Host pipe interior surfaces must be adequate to create an effective seal for the packer elements.

1.3 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.

1.4 Worker safety training should include reviewing the hazards associated with hoses, pumps, tanks, couplers, compressors, bottles, motors, and all other related application apparatus. Additional safety considerations including safely handling, mixing, and transporting of chemical grouts should be provided by the chemical grout manufacturer or supplier or both. Their safe operating practices and procedures should describe in detail appropriate personal protective equipment (PPE) for the various grouting operations. Operations covered should include the proper storage, transportation, mixing, and disposal of chemical grouts, additives, and their associated containers.

1.5 *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 This practice is under the jurisdiction of ASTM Committee F36 on Technology and Underground Utilities and is the direct responsibility of Subcommittee F36.20 on Inspection and Renewal of Water and Wastewater Infrastructure.

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2. Referenced Documents

2.1 NASSCO Standards:²

NASSCO Specifications Guidelines Wastewater Collection Systems Maintenance and Rehabilitation

NASSCO Specifications Guideline—Sewer Line Cleaning Wastewater Collections Systems Maintenance and Rehab, Sewer Line Cleaning

NASSCO Specifications Guidelines—Television Inspection, Main Sewers Wastewater Collections Systems Maintenance and Rehab, Television Inspection, Main Sewers

3. Summary of Practice

3.1 The work required by this practice shall consist of furnishing all labor, materials, equipment and supervising and performing all work necessary to rehabilitate the designated sanitary or storm sewer lines or both, all in accordance with the procedures. The work shall consist of, but not necessarily be limited to, performing the following tasks where specified:

3.1.1 *Sewer Line Cleaning*, shall be performed with hydraulically propelled high-velocity jet or mechanically powered equipment. Selection of equipment shall be based on field conditions such as access to manholes, quantity of debris, size of sewer, depth of flow, and so forth. NASSCO Specifications Guideline—Sewer Line Cleaning section adequately addresses the sewer line cleaning process in the current edition.

3.1.2 *Sewer Flow Control*, shall be performed as required to comply with this practice.

3.1.3 *Television Inspection*, shall be required to reveal and document sewer line conditions and be performed in advance of or in conjunction with pipe joint testing and sealing sewer pipe joints. NASSCO Specifications Guidelines—Television Inspection, Main Sewers section adequately addresses sewer line television inspection processes in the current edition.

3.1.4 *Sewer Pipe Joint Testing*, shall be performed to identify defective (infiltrating/exfiltrating) pipe joints and shall be accomplished by applying a positive test pressure to each individual sewer pipe joint, monitoring the test pressure and any test pressure decay, or through visual observation of the leaking joint.

² Available from National Association of Sewer Service Companies (NASSCO), 2470 Longstone Lane, Suite M, Marriottsville, MD 21104, <http://www.nassco.org>.