

TECH TIPS

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TECH TIPS BY NASSCO IS A BI-MONTHLY ARTICLE ON TRENDS, BEST PRACTICES AND INDUSTRY ADVICE FROM NASSCO'S TRENCHLESS TECHNOLOGY MEMBERSHIP PROFESSIONALS.

INJECTION GROUT SPECIFICATION GUIDELINE ALIGNS CONTRACTORS, ENGINEERS, AND MUNICIPALITIES

By NASSCO Member Don Rigby, VP Marketing and Education, Avanti International

The birth of a specification guideline begins with a need. It is born from a process of collaboration and consensus among multi-disciplined stakeholders. Over time it evolves, matures with refinements, and builds momentum within its community. After two years of dedication from leading contractors, engineers, municipal authorities, and technology providers, the first suggested standard specification for chemical grouting was born in May of 2012. In January of 2014, the second edition was released as the Suggested Standard Specification for Pressure Testing and Grouting of Sewer Joints, Laterals, and Lateral Connections—Using the Packer Method with Solution Grouts.



The process of building an operating standard is brutal—as it should be. The NASSCO organization provides the framework and its membership for peer review by industry professionals without bias for any one product, as a guideline to achieve a common goal. And it's working.

Prepared by members of ICGA (Infiltration Control Grouting Association), a Division of NASSCO, below are the key elements of the current Specification Guideline that ensures the desired outcome for grouting to effectively control infiltration in mainlines, laterals, and lateral connections for decades to come:

1. GENERAL

- Guidelines for specifying engineers and contractors for testing, sealing and validating joints and defects using the remote packer injection method
- Incorporates ASTM performance standards (F2304, F2454) and NASSCO's PACP (Pipeline Assessment and Certification Program)

2. PRODUCTS

- Testing, grouting, and monitoring equipment
- Chemical grouts and additives

3. EXECUTION

- Detailed procedures for testing, sealing and validating joints and defects in mainline, laterals, and lateral connections
- Pipe preparation and grout preparation
- Verification and warranty

4. TYPICAL BID ITEMS

- Recommended measurements and pay items to include pre-construction cleaning and pipe preparation, post-construction inspection, and warranty options

5. SAMPLE PAYMENT SCHEDULE

- Table of cost breakouts per procedure

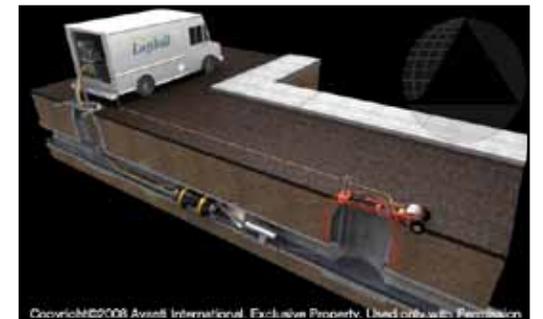
6. SUPPLEMENTARY UNIT PRICES

- Separate bid item for grout materials per gallon

The end result of applying these recommended operating standards is a major win/win. The engineer's specifications are clear and concise. The contractor knows precisely what is expected and their bid is both competitive and accurate. Contract execution is timely without change orders or cutting corners, and the municipality receives the best value from their investment to reduce flow to the treatment plant, lower operating costs, and extend the lifecycle of their underground assets. These galvanized guidelines provide alignment between contractors, engineers, and municipalities, but that's just the beginning. The ultimate beneficiary is the community—residents and local businesses—gain a safe, efficient underground collection system leading to a quality of life we've come to expect.

If you're an engineer specifying a trenchless project, contractor aspiring to align with the resurging grouting industry, or municipality with intent to control sewer infiltration, go to nassco.org. Download the most recent version of the 20-page PDF document (January, 2014) for free. As a benefit to NASSCO members, an editable version of this standard may be downloaded, from the members section, to easily incorporate value-engineering elements for site-specific conditions.

For quality assurance, NASSCO and ICGA plan to release an Inspector Training Certification Program (ITCP) specific to grouting. When contractors, engineers, and municipalities are aligned with a proven set of rules and guidelines, the future of injection grouting as the first defense against infiltration is promising.



According to EPA, infiltration is directly responsible for up to 50% of the flow to the WWTP. With the cost or burden of by-pass pumping, injection grouting is engineered specifically to stop infiltration cost-effectively at all four points of entry.