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An American National Standard

Standard Guide for Squeeze-Off of Polyolefin Gas Pressure Pipe and Tubing[1]

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1. Scope

1.1 This guide describes general procedures for squeeze-off of polyolefin gas pressure pipe and tubing. Pipe and squeeze tool manufacturers should be requested to supply specific recommendations for squeeze-off with their materials or products.

1.2 Governing codes and project specifications should be consulted. Nothing in this document should be construed as recommending practices or systems at variance with governing codes and project specifications.

1.3 This guide covers squeeze-off of polyolefin pipe and tubing in accordance with Specification D 2513.

1.4 Where applicable in this guide, "pipe" shall mean "pipe and tubing".

1.5 The values as stated in inch-pound units are to be regarded as the standard. The values in parentheses are given for information only.

1.6 *This standard does not purport to address all of the safety problems, 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:*

D 2513 Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings[2]

3. Significance and Use

3.1 Squeeze-off is a technique used to control the flow of gas through a pipe by the compressing action of a mechanical or hydraulic device. Squeeze-off may be used to reduce the flow of gas to an acceptable rate and under certain conditions complete stoppage of flow may be attained.

3.2 Proper squeeze-off procedures result in significant time saving in the reduction of gas flow in an emergency and in the maintenance and operation, or both, of a gas distribution system. Improper squeeze-off can cause damage to the pipe or create a safety hazard, or both.

4. Operator Experience

4.1 Each squeeze-off shall be made in accordance with written procedures that have been proven by test or experience to produce safe squeeze-off. The person actually responsible for the squeeze-off shall ensure that detailed procedures are developed in conjunction with the owner of the pipe system, the manufacturer of the pipe, and the manufacturer of the squeeze-off tools. These procedures shall include safety precautions to be followed and are to be issued before actual squeeze-off operations commence.

4.2 Skill and knowledge on the part of the operator are required to obtain good, safe squeeze-off. This skill and knowledge shall be obtained by making squeeze-offs in accordance with written procedures under the guidance of experienced operators.

5. Pipe and Conditions

5.1 In order to obtain proper squeeze-off, it is necessary to consider the pipe diameter, wall thickness, pipe material, internal pressure, and environmental conditions. The user shall request the pipe manufacturer to supply specific recommendations for the squeeze-off of the manufacturer's product with considerations for internal pressure and ambient temperature.

6. Apparatus

6.1 *Squeeze-off Tool*—A squeeze-off tool shall have the following features: proper squeeze bar configuration, force mechanism, over-squeeze protection, and premature release protection.

6.2 *Squeeze Bar Configuration*—The squeeze bars should be of a configuration which compresses the pipe wall to reduce the gas flow but does not damage the pipe. Therefore, squeeze bars are generally configured as circular, flat with rounded edges, or two circular bars side by side. Circular bars are generally restricted, as follows:

nominal pipe size, in.	minimum diameter in.	(mm)
½ –¾	1.0	(25)
1 – 2	1.25	(32)
3 – 4	1.5	(38)
6 – 8	2.0	(51)
10 – 12	3.0	(76)
14 – 16	3.5	(89)

6.3 *Force Mechanism*—The force mechanism shall be capable of squeezing the pipe to the gap stops or until flow

[1] This guide is under the jurisdiction of ASTM Committee F–17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.60 on Gas.

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[2] *Annual Book of ASTM Standards,* Vol 08.04.