



Standard Guide for Construction of Sounding Tube and Striker Plate for Tank Sounding¹

This standard is issued under the fixed designation F1386; 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.

^{ε1} NOTE—Keywords were added editorially in September 2016.

1. Scope

1.1 This guide covers design and construction criteria for striker plates and sounding tubes, excluding deck penetrations and caps, for use with sounding rods or tapes in freshwater, saltwater, and oil tanks.

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.

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

A36/A36M Specification for Carbon Structural Steel
A53/A53M Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
F722 Specification for Welded Joints for Shipboard Piping Systems
F1155 Practice for Selection and Application of Piping System Materials

2.2 ANSI Standards:³

ANSI B16.5 Pipe Flanges and Flange Fittings
ANSI B16.9 Factory Made Wrought Steel Butt Welding Fittings

ANSI B16.11 Forged Steel, Socket Welding and Threaded Fittings

ANSI B16.28 Wrought Steel, Butt Welding, Short Radius Elbows and Return

ANSI B31.1 Power Piping

2.3 ABS Standard:⁴

ABS Rules for Building and Classing Steel Vessels

2.4 AWS Standard:⁵

AWS D1.1 Structural Welding Code

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *external sounding tube*—a sounding tube located outside the boundaries of the tank being sounded.

3.1.2 *internal sounding tube*—a sounding tube located inside the tank being sounded.

3.1.3 *sounding*—measurement by sounding; a place or part of a body of liquid where a hand sounding line will reach bottom.

4. Classification

4.1 *Type I*—Internal sounding tube, with separate striker plate.

4.2 *Type II*—Internal sounding tube, with attached striker plate.

4.3 *Type III*—Internal sounding tube, with angle striker plate.

4.4 *Type IV*—External sounding tube.

5. Significance and Use

5.1 Sounding tubes may be fabricated from 1½ NPS or larger. Only when otherwise specified, Schedule 40 components, manufactured from the list of material indicated in Practice F1155 and Specification A53/A53M, Grade S or

¹ This guide is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.11 on Machinery and Piping Systems.

Current edition approved Sept. 1, 2016. Published September 2016. Originally approved in 1992. Last previous edition approved in 2010 as F1386 – 92 (2010). DOI: 10.1520/F1386-92R16E01.

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 Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁴ Available from American Bureau of Shipping (ABS), ABS Plaza, 16855 Northchase Dr., Houston, TX 77060, <http://www.eagle.org>.

⁵ Available from American Welding Society (AWS), 550 NW LeJeune Rd., Miami, FL 33126, <http://www.aws.org>.