Designation: F1437 – 06

An American National Standard

Standard Practice for Inclined Cargo Tank Ladders[1]

This standard is issued under the fixed designation F1437; 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 provides design, construction, and installation criteria for inclined ladders to be installed within cargo tanks.

1.2 Where ladders are attached to platforms, see Fig. 1 and Fig. 2 .

1.3 Values stated in SI units are to be regarded as the standard. The values stated in parentheses are provided for information purposes only.

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.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A36/A36M Specification for Carbon Structural Steel

2.2 *Other Documents:*

American Bureau of Shipping Rules for Building and Classing Steel Vessels [3]

American Welding Society Publication, AWS D 1.1 Structural Welding Code—Steel[4]

SAE AMS-C-27725 Coatings, Corrosion Preventative, Polyurethane, for Aircraft Integral Fuel Tanks for Use to 250 Degrees F (121 Degrees C)[5]

Steel Structures Painting Council Specification [6]

3. Classification

3.1 Ladders shall be classified into two types:

3.1.1 *Type I*—Ladders installed within cargo tanks carrying cargo other than fuel oil.

3.1.2 *Type II*—Ladders installed within cargo tanks carrying fuel oil.

4. Significance and Use

4.1 This practice establishes the procedure for the construction and installation of inclined ladders to be fabricated and installed, by the shipyards, within the cargo tanks.

5. Materials and Manufacture

5.1 *Materials—(Type I)*:

5.1.1 *Stringers*—230-mm (approximately 9-in.) by 50-mm (approximately 1⅞-in.) structural channels of carbon steel. (See Specification A36/A36M.)

5.1.2 *Upper and Lower Clips*—Flat bars of carbon steel. (See Specification A36/A36M.)

5.1.3 *Handrails and Stanchions*—25 mm (approximately 1 in.) diameter carbon steel. (See Specification A36/A36M.)

5.1.4 *Treads*—75-mm (approximately 3-in.) by 75-mm by 10-mm (approximately ⅜-in.) structural angles of carbon steel. (See Specification A36/A36M.)

5.2 *Materials—(Type II)*:

5.2.1 *Stringers*—Structural flat bars of carbon steel. (See Specification A36/A36M.)

5.2.2 *Upper and Lower Clips*—Flat bars of carbon steel. (See Specification A36/A36M.)

5.2.3 *Treads*—25-mm (approximately 1-in.) by 25-mm square bars of carbon steel. (See Specification A36/A36M.)

5.2.4 *Handrails and Stanchions*—25–mm (approximately 1–in.) diameter carbon steel. (See Specification A36/A36M.)

5.3 *Manufacture*:

5.3.1 All welding shall be in accordance with American Bureau Shipping Rules for Building and Classing Steel Vessels or AWS D 1.1.

5.3.2 Tolerances shall be under 6 in. ± 1/64 in., from 6 to 24 in. ± 1/32 in., and over 24 in. ± 1/16 in.

[1] This practice is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.03 on Outfitting and Deck Machinery.

Current edition approved Dec. 1, 2006. Published January 2007. Originally approved in 1992. Last previous edition approved in 2001 as F1437 - 01. DOI: 10.1520/F1437-06.

[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 Bureau of Shipping (ABS), ABS Plaza, 16855 Northchase Dr., Houston, TX 77060, http://www.eagle.org.

[4] Available from American Welding Society (AWS), 550 NW LeJeune Rd., Miami, FL 33126, http://www.aws.org.

[5] Available from Naval Sea Systems Command (NAVSEA), 1333 Isaac Hull Ave., SE, Washington, DC 20376, http://www.navsea.navy.mil.

[6] Available from Society for Protective Coatings (SSPC), 40 24th St., 6th Floor, Pittsburgh, PA 15222-4656, http://www.sspc.org.