



Standard Specification for Chocks, Panama, Mooring Cast Steel¹

This standard is issued under the fixed designation F2935; 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 specification covers the principal dimensions and materials of chocks installed in ships to comply with the regulations of the Panama Canal.

1.2 Chocks can be used with either wire rope or fiber and synthetic ropes.

1.3 Chocks are for mounting directly on a deck, seat (foundation) or for mounting in a bulwark.

1.4 To meet Panama Canal Company regulations the radius of contact surfaces of lines must be 180 mm.

1.5 The values stated in SI units are to be regarded as the standard.

2. Referenced Documents

- 2.1 *ASTM Standards*:²
[A27/A27M Specification for Steel Castings, Carbon, for General Application](#)
- 2.2 *ANSI Standard*:³
[B 46.1 Surface Texture](#)

3. Descriptions of Terms Specific to This Standard

3.1 *bulwark*—a structural enclosure along the edge of the ship to serve as a rail.

3.2 *closed chock*—a metal flared ring-like fitting mounted on a ship through which mooring lines pass to tow or moor a ship.

3.3 *mooring ring or pipe*—a chock mounted in the bulwark and conforming to Type II or IV.

3.4 *rope contact area*—that part of the fitting in contact with the mooring line in normal mooring operations.

4. Classification

4.1 The size of the chock shall be identified by the nominal size “L” and “H” of the opening as shown in [Table 1](#) and [Fig. 1](#), and [Table 2](#) and [Fig. 2](#). Sizes larger than 360 mm by 260 mm may be considered as double chocks.

4.2 Chocks are furnished in types as follows:

4.2.1 *Type I*—Deck mounted, as shown in [Fig. 1](#), and conforms to all dimensions in [Table 1](#).

4.2.2 *Type II*—Bulwark mounted, as shown in [Fig. 2](#), and conforms to all dimensions in [Table 2](#).

4.2.3 *Type III*—Deck mounted conforming only to dimensions “L”, “H”, and 180 mm radius at entrance, as shown in [Fig. 1](#) and [Table 1](#) and the requirements of Sections 6 – 10.

4.2.4 *Type IV*—Bulwark mounted conforming only to dimensions “L”, “H”, and 180 mm radius at entrance, as shown in [Fig. 2](#) and [Table 2](#) and the requirements of Sections 6 to 10.

4.3 Chocks shall be furnished in either of the following grades:

4.3.1 *Grade 1*—Surface finish shall be in the as cast condition.

4.3.2 *Grade 2*—Surface finish in way of rope contact shall be in accordance with [7.2](#).

5. Ordering Information

5.1 Orders for chocks under this specification shall include this standard date, and the following:

- 5.1.1 Quantity (number) of chocks required,
- 5.1.2 Size (opening, $L \times H$),
- 5.1.3 Type and grade,
- 5.1.4 Primer and coating, if any (see [7.3](#)), and
- 5.1.5 Marking.

6. Materials and Manufacture

6.1 Material shall be cast steel in accordance with Specification [A27/A27M](#), Grade 60-30.

6.2 For Types III and IV the manufacturer shall certify that chock is in compliance with Panama Canal requirements.

6.3 Casting shall be smooth, fine grain, and free of cracks, hot tears, and blow holes, detrimental to end use. Defects having an area larger than 25 by 25 mm² and a depth of more than 10 % of the thickness in way thereof will be cause for rejection. Small defects in way of rope contact shall be welded

¹ This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.01 on Structures.

Current edition approved Jan. 1, 2012. Published February 2012. DOI:10.1520/F2935-12.

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>.