

Standard Specification for Bell, Cast, Sound Signalling¹

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1. Scope

1.1 This specification covers cast sound-signalling bells, together with bulkhead mounting plates for the smaller bells, for use on ships, boats, and other marine craft, for compliance with the rules in the convention on the International Regulations for Preventing Collisions at Sea (commonly called Colregs).² See [Appendix X1](#).

1.2 Bells and bulkhead mounting plate shall be sized as indicated in Section 4 (see [Appendix X2](#)).

1.3 For consistency with International Regulations, all measurements are in SI units.

2. Referenced Documents

2.1 *ASTM Standards*:³

[B584 Specification for Copper Alloy Sand Castings for General Applications](#)

2.2 *Other Documents*:

[CFR 33 Part 81–72 Implementing Rules](#)²

[CFR 33 Part 86, Subpart B, Bell or Gong](#)²

3. Terminology

3.1 *Definitions*:

3.1.1 *bell, n*—a hollow metal instrument that rings when struck.

3.1.2 *cast, v*—to form by molding in a hollow form for shaping a liquid or plastic substance.

3.1.3 *clapper, n*—hammer like object inside a bell.

4. Classification

4.1 Bells shall be furnished in the following sizes, based on bellmouth diameter in millimetres (see [Appendix X2](#)):

- 4.1.1 150 mm,
- 4.1.2 200 mm (2.2 kg),
- 4.1.3 200 mm (4.5 kg),
- 4.1.4 250 mm,
- 4.1.5 300 mm,
- 4.1.6 360 mm,
- 4.1.7 400 mm, and
- 4.1.8 550 mm.

4.2 Bulkhead mounting plates shall be furnished for the following bell sizes:

- 4.2.1 150 mm, and
- 4.2.2 200 mm.

5. Ordering Information

5.1 Orders for materials under this specification shall include the following information:

- 5.1.1 ASTM designation and year of issue.
- 5.1.2 Number of bells.
- 5.1.3 Size of bell(s) (see [4.1](#)).
- 5.1.4 Additional bulkhead mounting plates (see [4.2](#) and [6.2.2](#)).
- 5.1.5 Inscription required (see [12.1](#)).
- 5.1.6 Packaging, if other than commercial (see [Section 13](#)).

6. Materials and Manufacture

6.1 *Material*:

6.1.1 Bell bodies, clappers, and other cast fittings and parts shall be copper alloy conforming to Specification [B584](#), UNS C87200.

6.1.2 Fittings such as bolts, nuts, washers, pins, and supporting lugs shall be of copper alloy compatible with the bell castings.

6.2 *Manufacture*:

6.2.1 Construction shall be in accordance with [Fig. 1](#), [Fig. 2](#), and [Fig. 3](#).

6.2.2 For [Fig. 1](#) and [Fig. 2](#), one bulkhead mounting plate shall be furnished with each bell, however, additional mounting plates may be ordered.

6.2.3 For all bells, two extra supporting nuts, washers, and acorn nuts (where used) shall be furnished.

¹ This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.07 on General Requirements.

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² Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, <http://www.dodssp.daps.mil>.

³ 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.