



Standard Specification for Centrifugal Pump, Shipboard Use¹

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1. Scope

1.1 This specification covers the requirements applicable to the design and construction of centrifugal pumps for shipboard application. The three classes of service covered by this specification are as follows:

- 1.1.1 Class 1—Freshwater,
- 1.1.2 Class 2—Seawater, and
- 1.1.3 Class 3—Hydrocarbon pumps (less than 1500 SSU).

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

2. Referenced Documents

2.1 ASTM Standards:²

- A36/A36M Specification for Carbon Structural Steel
- A193/A193M Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications
- A194/A194M Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both
- A276 Specification for Stainless Steel Bars and Shapes
- A494/A494M Specification for Castings, Nickel and Nickel Alloy
- A582/A582M Specification for Free-Machining Stainless Steel Bars
- A743/A743M Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application
- A747/A747M Specification for Steel Castings, Stainless, Precipitation Hardening
- A890/A890M Specification for Castings, Iron-Chromium-Nickel-Molybdenum Corrosion-Resistant, Duplex (Austenitic/Ferritic) for General Application

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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.

- A995/A995M Specification for Castings, Austenitic-Ferritic (Duplex) Stainless Steel, for Pressure-Containing Parts
- B148 Specification for Aluminum-Bronze Sand Castings
- B164 Specification for Nickel-Copper Alloy Rod, Bar, and Wire
- B271 Specification for Copper-Base Alloy Centrifugal Castings
- B369 Specification for Copper-Nickel Alloy Castings
- B505/B505M Specification for Copper Alloy Continuous Castings
- B584 Specification for Copper Alloy Sand Castings for General Applications
- F468 Specification for Nonferrous Bolts, Hex Cap Screws, Socket Head Cap Screws, and Studs for General Use
- F1511 Specification for Mechanical Seals for Shipboard Pump Applications

2.2 ANSI Standards:

- B1 ISO Metric Screw Threads (ANSI-B1 Report)³
- B1.1 Unified Screw Threads³
- B16.1 Cast Iron Pipe Flanges and Flange Fittings³
- B16.5 Steel Pipe Flanges, Flanged Valves and Fittings, 150, 300, 400, 600, 900, 1500 and 2500 lb.³
- B16.11 Forged Steel Fittings, Socket Welding and Threaded³
- B16.24 Bronze Flanges and Flanged Fittings, 150, 300lb³

2.3 Hydraulic Institute Standards:

- ANSI/HI 1.1-1.5 American National Standard for Centrifugal Pumps for Nomenclature, Definitions, Applications and Operation³
- ANSI/HI 1.6 American National Standard for Centrifugal Pump Tests³
- ANSI/HI 9.1-9.6 American National Standard for Pumps—General Guidelines for Types, Definitions, Applications and Sound Measurements³

2.4 AFBMA Standards:

- 9 Load Ratings and Fatigue Life for Ball Bearings⁴
- 11 Load Ratings and Fatigue Life for Roller Bearings⁴

2.5 ISO Standards:

- ISO 9001 Quality Systems and Quality Assurance—Design/Development, Production, Installation and Service³

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

⁴ Anti-Friction Bearing Manufacturers Association, Inc., 1101 Connecticut Ave., N.W., Suite 700, Washington, DC 20036.