



Standard Specification for Mechanical Seals for Shipboard Pump Applications¹

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1. Scope

1.1 This specification covers mechanical end-face seals for centrifugal and positive displacement pumps for shipboard use.

1.2 The following types of seals are not included in this specification: lip seals, oil seals, circumferential seals, or labyrinth seals.

1.3 The values stated in inch-pound units are to be regarded as the standard. The SI units given in parentheses are for information only. A companion hard metric standard is in the process of preparation.

1.4 Special requirements for U.S. Navy Shipboard Pump Applications are included in Supplement S1.

2. Referenced Documents

2.1 ASTM Standards:²

- A 108 Specification for Steel Bars, Carbon, Cold-Finished, Standard Quality
- A 182/A182M Specification for Forged or Rolled Alloy-Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service
- A 240/A 240M Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
- A 276 Specification for Stainless Steel Bars and Shapes
- A 313/A 313M Specification for Stainless Steel Spring Wire
- A 351/A351M Specification for Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts
- A 436 Specification for Austenitic Gray Iron Castings
- A 494/A494M Specification for Castings, Nickel and Nickel Alloy
- A 564/A564M Specification for Hot-Rolled and Cold-Finished Age-Hardening Stainless Steel Bars and Shapes
- A 579 Specification for Superstrength Alloy Steel Forgings

- A 693 Specification for Precipitation-Hardening Stainless and Heat-Resisting Steel Plate, Sheet, and Strip
- A 705/A705M Specification for Age-Hardening Stainless and Steel Forgings
- A 744/A744M Specification for Castings, Iron-Chromium-Nickel, Corrosion Resistant, for Severe Service
- B 62 Specification for Composition Bronze or Ounce Metal Castings
- B 127 Specification for Nickel-Copper Alloy (UNS N04400) Plate, Sheet, and Strip
- B 164 Specification for Nickel-Copper Alloy Rod, Bar, and Wire
- B 166 Specification for Nickel-Chromium-Iron Alloys (UNS N06600, N06601, N06603, N06690, N06693, N06025, and N06045) and Nickel-Chromium-Cobalt-Molybdenum Alloy (UNS N06617) Rod, Bar, and Wire
- B 168 Specification for Nickel-Chromium-Iron Alloys (UNS N06600, N06601, N06603, N06690, N06693, N06025, and N06045) and Nickel-Chromium-Cobalt-Molybdenum Alloy (UNS N06617) Plate, Sheet, and Strip
- B 271 Specification for Copper-Base Alloy Centrifugal Castings
- B 333 Specification for Nickel-Molybdenum Alloy Plate, Sheet, and Strip
- B 335 Specification for Nickel-Molybdenum Alloy Rod
- B 338 Specification for Seamless and Welded Titanium and Titanium Alloy Tubes for Condensers and Heat Exchangers
- B 348 Specification for Titanium and Titanium Alloy Bars and Billets
- B 367 Specification for Titanium and Titanium Alloy Castings
- B 443 Specification for Nickel-Chromium-Molybdenum-Columbium Alloy (UNS N06625) and Nickel-Chromium-Molybdenum-Silicon Alloy (UNS N06219) Plate, Sheet, and Strip
- B 446 Specification for Nickel-Chromium-Molybdenum-Columbium Alloy (UNS N06625), Nickel-Chromium-Molybdenum-Silicon Alloy (UNS N06219) and Nickel-Chromium-Molybdenum-Tungsten Alloy (UNS N06650) Rod and Bar
- B 472 Specification for Nickel Alloy UNS N06030, UNS N06022, UNS N06200, UNS N08020, UNS N08026, UNS

¹ This specification 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.

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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.