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TABLE 56.60–1(b)—ADOPTED STANDARDS APPLICABLE TO PIPING SYSTEMS (REPLACES TABLE 126.1)—Continued

SP–55	Quality Standard for Steel Castings for Valves, Flanges and Fittings and Other Piping Components—Visual Method.
SP–58	Pipe Hangers and Supports—Materials, Design and Manufacture.
SP–61	Pressure Testing of Steel Valves.
SP–67	Butterfly Valves.[2] [4]
SP–69	Pipe Hangers and Supports—Selection and Application.
SP–72	Ball Valves with Flanged or Butt-Welding Ends for General Service.[4]
SP–73	Brazing Joints for Copper and Copper Pressure Fittings.
SP–83	Class 3000 Steel Pipe Unions, Socket-Welding and Threaded.

[1] [Reserved]
[2] In addition, for bronze valves, adequacy of body shell thickness shall be satisfactory to the Marine Safety Center. Refer to § 56.60–10 of this part for cast-iron valves.
[3] Mill or manufacturer's certification is not required, except where a needed portion of the required marking is deleted because of size or is absent because of age of existing stocks.
[4] Because this standard offers the option of several materials, some of which are not generally acceptable to the Coast Guard, compliance with the standard does not necessarily indicate compliance with these rules. The marking on the component or the manufacturer or mill certificate must indicate the specification or grade of the materials as necessary to fully identify the materials. The materials must comply with the requirements in this subchapter governing the particular application.

[USCG–2003–16630, 73 FR 65179, Oct. 31, 2008]

§ 56.60–2 Limitations on materials.

Welded pipe and tubing. The following restrictions apply to the use of welded pipe and tubing specifications when utilized in piping systems, and not when utilized in heat exchanger, boiler, pressure vessel, or similar components:

(a) *Longitudinal joint.* Wherever possible, the longitudinal joint of a welded pipe shall not be pierced with holes for branch connections or other purposes.

(b) *Class II.* Use unlimited except as restricted by maximum temperature or pressure specified in Table 56.60–1(a) or by the requirements contained in § 56.10–5(b) of this chapter.

(c) *Class I.* (1) For those specifications in which a filler metal is used, the following applies to the material as furnished prior to any fabrication:

(i) For use in service above 800 °F. full welding procedure qualifications by the Coast Guard are required. See part 57 of this subchapter.

(ii) Ultrasonic examination as required by item S–6 in ASTM A 376 (incorporated by reference; see 46 CFR 56.01–2) shall be certified as having been met in all applications except where 100 percent radiography is a requirement of the particular material specification.

(2) For those specifications in which no filler material is used in the welding process, the ultrasonic examination as required by item S–6 in ASTM A–376 shall be certified as having been met for service above 800 °F.

TABLE 56.60–2(a)—ADOPTED SPECIFICATIONS NOT LISTED IN THE ASME BOILER AND PRESSURE VESSEL CODE *

ASTM specifications	Source of allowable stress	Notes
Ferrous Materials [1]		
Bar stock:		
A 276 (Grades 304–A, 304L–A, 310–A, 316–A, 316L–A, 321–A, 347–A, and 348–A).	See footnote 4	([4]).
A 575 and A 576. (Grades 1010–1030)	See footnote 2	([2] [3]).

TABLE 56.60–2(a)—ADOPTED SPECIFICATIONS NOT LISTED IN THE ASME BOILER AND PRESSURE VESSEL CODE *—Continued

ASTM specifications	Source of allowable stress	Notes
Nonferrous Materials		
Bar stock:		
B 16 (soft and half hard tempers)	See footnote 5	(5 7).
B 21 (alloys A, B, and C)	See footnote 8	(8).
B 124:		
Alloy 377	See footnotes 5 and 9	(5 9).
Alloy 464	See footnote 8	(8 10).
Alloy 655	See footnote 11	(11).
Alloy 642	See footnote 12	(7 12).
Alloy 630	See footnote 13	(7 13).
Alloy 485	See footnote 8	(8 10).
Forgings:		
B 283 (forging brass)	See footnotes 5 and 9	(5 9).
Castings:		
B 26	See footnotes 5, 14, and 15	(5 14 15).
B 85	See footnotes 5, 14, and 15	(5 14 15).

* NOTE: Table 56.60–2(a) is a listing of adopted bar stock and nonferrous forging and casting specifications not listed in the ASME Boiler and Pressure Vessel Code. Particular attention should be given to the supplementary testing requirements and service limitations contained in the footnotes. All ASTM standards referred to in Table 56.60–2(a) and its footnotes are incorporated by reference (see 46 CFR 56.01–2).

[1] For limitations in use refer to 46 CFR 56.60–5.

[2] Allowable stresses shall be the same as those listed in UCS23 of section VIII of the ASME Boiler and Pressure Vessel Code (incorporated by reference; see 46 CFR 56.01–2) for SA–675 material of equivalent tensile strength.

[3] Physical testing shall be performed as for material manufactured to ASME SA–675 (incorporated by reference, see 46 CFR 56.01–2), except that the bend test shall not be required.

[4] Allowable stresses shall be the same as those listed in UCS23 of section VIII of the ASME Boiler and Pressure Vessel Code for the corresponding SA–182 material.

[5] Limited to air and hydraulic service with a maximum design temperature of 150 °F. The material must not be used for salt water service or other fluids that may cause dezincification or stress corrosion cracking.

[6] [Reserved]

[7] An ammonia vapor test, in accordance with ASTM B 858M–95 shall be performed on a representative model of each finished product design.

[8] Allowable stresses shall be the same as those listed in UNF23 of section VIII of the ASME Boiler and Pressure Vessel Code for SB–171, naval brass.

[9] An ammonia vapor test, in accordance with ASTM B 858M, shall be performed on a representative model for each finished product design. Tension tests shall be performed to determine tensile strength, yield strength, and elongation. Minimum values shall be those listed in Table 3 of ASTM B 283.

[10] Physical testing, including mercurous nitrate test, shall be performed as for material manufactured to ASTM B 21.

[11] Physical testing shall be performed as for material manufactured to ASTM B 96. Allowable stresses shall be the same as those listed in UNF23 of section VIII of the ASME Boiler and Pressure Vessel Code for SB–96 and shall be limited to a maximum allowable temperature of 212 °F.

[12] Physical testing shall be performed as for material manufactured to ASTM B 171, alloy D. Allowable stresses shall be the same as those listed in UNF23 of section VIII of the ASME Boiler and Pressure Vessel Code for SB–171, aluminum bronze D.

[13] Physical testing shall be performed as for material manufactured to ASTM B 171, alloy E. Allowable stresses shall be the same as those listed in UNF23 of section VIII of the ASME Boiler and Pressure Vessel Code for SB–171, aluminum bronze, alloy E.

[14] Tension tests shall be performed to determine tensile strength, yield strength, and elongation. Minimum values shall be those listed in table X–2 of ASTM B 85.

[15] Those alloys with a maximum copper content of 0.6 percent or less shall be acceptable under this specification. Cast aluminum shall not be welded or brazed.

[CGFR 68–82, 33 FR 18843, Dec. 18, 1968, as amended by CGFR 69–127, 35 FR 9978, June 17, 1970; CGD 72–104R, 37 FR 14233, July 18, 1972; CGD 73–248, 39 FR 30839, Aug. 26, 1974; CGD 73–254, 40 FR 40165, Sept. 2, 1975; CGD 77–140, 54 FR 40612, Oct. 2, 1989; CGD 95–012, 60 FR 48050, Sept. 18, 1995; CGD 95–027, 61 FR 26001, May 23, 1996; CGD 95–028, 62 FR 51201, Sept. 30, 1997; USCG–1998–4442, 63 FR 52190, Sept. 30, 1998; USCG–1999–5151, 64 FR 67180, Dec. 1, 1999; USCG–2003–16630, 73 FR 65182, Oct. 31, 2008]

§ 56.60–3 Ferrous materials.

(a) Ferrous pipe used for salt water service must be protected against corrosion by hotdip galvanizing or by the use of extra heavy schedule material.

(b) (Reproduces 124.2.C) Carbon or alloy steel having carbon content of more than 0.35 percent shall not be used in welded construction, nor be shaped by oxygen-cutting process or other thermal-cutting process.

[CGD 73–254, 40 FR 40165, Sept. 2, 1975, as amended by USCG–2003–16630, 73 FR 65183, Oct. 31, 2008]

§ 56.60–5 Steel (High temperature applications).

(a) (Reproduces 124.2.A.) Upon prolonged exposure to temperatures above 775 °F (412 °C), the carbide phase of plain carbon steel, plain nickel-alloy