

§ 56.75-5

pounds per square inch or the temperature exceeds 750 °F. or in Class I-L systems.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by USCG-2003-16630, 73 FR 65184, Oct. 31, 2008]

Subpart 56.75—Brazing

§ 56.75-5 Filler metal.

(a) The filler metal used in brazing must be a nonferrous metal or alloy having a melting point above 1,000 °F. and below that of the metal being joined. The filler metal must meet and flow freely within the desired temperature range and, in conjunction with a suitable flux or controlled atmosphere, must wet and adhere to the surfaces to be joined. Prior to using a particular brazing material in a piping system, the requirements of § 56.60-20 of this part should be considered.

(b) The brazing material used shall have a shearing strength of at least 10,000 pounds per square inch. The maximum allowable working pressure for brazing piping shall be determined by this part.

(c) Fluxes that are fluid and chemically active at the brazing temperature must be used when necessary to prevent oxidation of the filler metal and of the surfaces to be joined and to promote free flowing of the filler metal.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by CGD 77-140, 54 FR 40615, Oct. 2, 1989; USCG-2003-16630, 73 FR 65184, Oct. 31, 2008]

§ 56.75-10 Joint clearance.

(a) The clearance between surfaces to be joined shall be no larger than is necessary to insure complete capillary distribution of the filler metal; between 0.002-inch minimum and 0.006-inch maximum.

(b) [Reserved]

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by USCG-2003-16630, 73 FR 65184, Oct. 31, 2008]

§ 56.75-15 Heating

(a) The joint shall be brought to brazing temperature in as short a time as possible to minimize oxidation.

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(b) [Reserved]

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by USCG-2003-16630, 73 FR 65184, Oct. 31, 2008]

§ 56.75-20 Brazing qualification.

(a) The qualification of the performance of brazers and brazing operators shall be in accordance with the requirements of part C, Section IX of the ASME Boiler and Pressure Vessel Code (incorporated by reference; see 46 CFR 56.01-2) and part 57 of this subchapter.

(b) Manufacturers shall perform those tests required by paragraph (a) of this section prior to performing production brazing.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by USCG-2003-16630, 73 FR 65184, Oct. 31, 2008]

§ 56.75-25 Detail requirements.

(a) Pipe may be fabricated by brazing when the temperature to which such connections may be subjected does not exceed 425 °F. (For exception refer to § 56.30-30(b)(1).)

(b) The surfaces to be brazed must be clean and free from grease, oxides, paint, scale, and dirt of any kind. Any suitable chemical or mechanical cleaning method may be used to provide a clean, wettable surface for brazing.

(c) After the parts to be joined have been thoroughly cleaned the edges to be brazed shall be given an even coating of flux prior to heating the joint as a protection against oxidation.

[CGFR 68-82, 33 FR 18843, Dec. 18, 1968, as amended by USCG-2003-16630, 73 FR 65184, Oct. 31, 2008]

§ 56.75-30 Pipe joining details.

(a) *Silver brazing.* (1) Circumferential pipe joints may be either of the socket or butt type. When butt joints are employed the edges to be joined shall be cut or machined square and the edges shall be held closely together to insure a satisfactory joint.

(b) *Copper-alloy brazing.* (1) Copper-alloy brazing may be employed to join pipe, valves, and fittings. Circumferential joints may be either of the butt or socket type. Where butt joints are employed, the included angle shall be not less than 90° where the wall thickness