

from above the bulkhead deck, or locally if immediate access is possible;

(2) Protection from mechanical damage must be specifically considered and all protective covering or shields must be installed to the satisfaction of the cognizant OCMI;

(3) Through hull fittings and shutoff valves must be metallic. In the case of nonmetallic hulls, materials that will afford an equal degree of safety and heat resistivity as that afforded by the hull may be approved; and

(4) The material specification must show that the rigid nonmetallic material possesses characteristics adequate for its intended service and environment and must be approved for use by the cognizant OCMI.

(e) Where flexible nonmetallic hose is permitted for use in piping systems by this section, it must meet SAE J-1942 (incorporated by reference; see 46 CFR 175.600) or be specifically approved by the Commandant. The following restrictions apply:

(1) Flexible nonmetallic hose must be complete with factory-assembled end fittings requiring no further adjustment of the fittings on the hose, or field attachable type fittings may be used. Hose end fittings must comply with SAE J-1475 (incorporated by reference; see 46 CFR 175.600). Field attachable fittings must be installed following the manufacturer's recommended practice. If special equipment is required, such as crimping machines, it must be of the type and design specified by the manufacturer. If field attachable type fittings are used, each hose assembly must be individually hydrostatically tested to twice the maximum operating pressure of the system;

(2) Flexible nonmetallic hose may be used in non-vital water and pneumatic systems, subject to the limitations of paragraph (d)(1) through (d)(4) of this section. Unreinforced hoses are limited to a maximum service pressure of 349 kPa (50 psig), reinforced hoses are limited to a maximum service pressure of 1,034 kPa (150 psig); and

(3) Flexible nonmetallic hose may be used in lube oil, fuel oil and fluid power systems, subject to the following requirements:

(i) Flexible hose may only be used at a pressure not to exceed the manufacturer's rating and must have a high resistance to saltwater, petroleum oils, and vibration;

(ii) Flexible hose runs must be visible, easily accessible, protected from mechanical damage, and must not penetrate watertight decks or bulkheads;

(iii) Flexible hose must be fabricated with an inner tube and a cover of synthetic rubber or other suitable material reinforced with wire braid;

(iv) Flexible hose used for alcohol-gasoline blend fuels must meet the permeability requirements specified in 33 CFR part 183, subpart J; and

(v) For the purpose of flexibility only, flexible hose installed in lengths of not more than 760 millimeters (30 inches) and subject to pressures of not more than 35 kPa (5 psig), may meet the following requirements:

(A) Suitable compression type connection fittings may be accepted;

(B) Flexible hose designed for use with hose clamps may be installed with two clamps, at both ends of the hose, which:

(1) Do not rely on the spring tension of the clamp for compressive force; and

(2) Are installed beyond the bead or flare or over the serrations of the mating spud, pipe, or hose fitting; and

(C) USCG Type A1, A2, B1, or B2 flexible hose may be accepted in accordance with 33 CFR part 183, subpart J.

[CGD 85-080, 61 FR 986, Jan. 10, 1996, as amended at 62 FR 51358, Sept. 30, 1997; USCG-2003-16630, 73 FR 65209, Oct. 31, 2008]

§ 182.730 Nonferrous metallic piping materials.

(a) Nonferrous metallic piping materials are acceptable for use in the following:

(1) Non-vital systems;

(2) Aluminum fuel piping, if of a minimum of Schedule 80 wall thickness on an aluminum hulled vessel;

(3) Aluminum bilge, ballast, and firemain piping on an aluminum hulled vessel;

(4) If acceptable to the cognizant OCMI, nonferrous metallic piping with a melting temperature above 927 °C (1,700 °F) may be used in vital systems

that are deemed to be galvanically compatible; and

(5) Other uses specifically accepted by the cognizant OCMI.

(b) Where nonferrous metallic material is permitted for use in piping systems by this subpart, the restrictions in this paragraph apply:

(1) Provisions must be made to protect piping systems using aluminum alloys in high risk fire areas due to the low melting point of aluminum alloys;

(2) Provisions must be made to prevent or mitigate the effect of galvanic corrosion due to the relative solution potentials of copper, aluminum, and alloys of copper and aluminum, which are used in conjunction with each other, steel, or other metals and their alloys;

(3) A suitable thread compound must be used in making up threaded joints in aluminum pipe to prevent seizing. Pipe in the annealed temper must not be threaded;

(4) The use of aluminum alloys with a copper content exceeding 0.6 percent is prohibited; and

(5) The use of cast aluminum alloys in hydraulic fluid power systems must be in accordance with the requirements of §58.30–15(f) in subchapter F of this chapter.

PART 183—ELECTRICAL INSTALLATION

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AUTHORITY: 46 U.S.C. 2103, 3306; E.O. 12234, 45 FR 58801, 3 CFR, 1980 Comp., p. 277; Department of Homeland Security Delegation No. 0170.1.

SOURCE: CGD 85–080, 61 FR 997, Jan. 10, 1996, unless otherwise noted.

Subpart A—General Provisions

§ 183.100 Intent.

This part contains requirements for the design, construction, installation, and operation of electrical equipment and systems including power sources, lighting, motors, miscellaneous equipment, and safety systems.

§ 183.115 Applicability to existing vessels.

(a) Except as otherwise required by paragraphs (b) and (c) of this section, an existing vessel must comply with the regulations on electrical installations, equipment, and material that were applicable to the vessel on March 10, 1996, or, as an alternative, the vessel may comply with the regulations in this part.

(b) An existing vessel must comply with the requirements of §§ 183.420 and 183.430.

(c) New installations of electrical equipment and material, and the repair