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§ 153.233 Separation of tanks from machinery, service and other spaces.

(a) To prevent leakage through a single weld failure, the following spaces must be separated from a cargo by two walls, two bulkheads, or a bulkhead and a deck not meeting in a cruciform joint:

(1) Machinery spaces.

(2) Service spaces.

(3) Accommodation spaces.

(4) Spaces for storing potable domestic, or feed water.

(5) Spaces for storing edibles.

(b) Some examples of arrangements that may separate cargo from the spaces listed in paragraph (a) of this section are the following:

(1) Dedicated ballast tanks.

(2) Cargo pumprooms.

(3) Ballast pumprooms.

(4) Tanks not carrying a cargo listed in this part.[3]

(5) A cofferdam aft of the cargo containment systems and whose forward bulkhead is forward of any joint common to an accommodations space and the deck.

(6) Double walled piping or a piping tunnel.

§ 153.234 Fore and aft location.

Except as allowed in § 153.7, each ship must meet the following:

(a) Each cargo containment system and any compartments within which a containment system is located must be forward of a tankship's accommodation spaces.

(b) Except as described in § 153.235, each cargo containment system must be located at least 0.05L aft of the forward perpendicular, but in no case forward of a collision bulkhead.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 81–101, 52 FR 7781, Mar. 12, 1987]

§ 153.235 Exceptions to cargo piping location restrictions.

Cargo piping must not be located in those areas from which a containment system is excluded by §§ 153.230(b), 153.231(b), and 153.234(b) unless the cargo piping:

(a) Drains back to the cargo tank under any heel or trim resulting from the damage specified in § 172.135 of this chapter; and

(b) Enters the cargo tank above the liquid level for a full tank in any condition of heel or trim resulting from the damage specified in § 172.135 of this chapter.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 79–023, 48 FR 51009, Nov. 4, 1983]

§ 153.236 Prohibited materials.

When one of the following paragraphs of this section is referenced in Table 1, the materials listed in that paragraph may not be used in components that contact the cargo liquid or vapor:

(a) Aluminum or aluminum alloys.

(b) Copper or copper alloys.

(c) Zinc, galvanized steel or alloys having more than 10 percent zinc by weight.

(d) Magnesium.

(e) Lead.

(f) Silver or silver alloys.

(g) Mercury.

§ 153.238 Required materials.

When one of the following paragraphs of this section is referenced in Table 1, only those materials listed in that paragraph may be used in components that contact the cargo liquid or vapor:

(a) Aluminum, stainless steel, or steel covered with a protective lining or coating.

(b) With cargo concentrations of 98 percent or greater, aluminum or stainless steel.

(c) With cargo concentrations of less than 98 percent, 304L or 316 stainless steel.

(d) Solid austenitic stainless steel.

(e) Stainless steel or steel covered with a suitable protective lining or coating. (See § 153.266.)

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 88–100, 54 FR 40041, Sept. 29, 1989]

§ 153.239 Use of cast iron.

(a) Cast iron used in a cargo containment system must meet the requirements of § 56.60–10(b) of this chapter.

(b) For purposes of this section, the term ''lethal products'' in § 56.60–10(b)

[3] See also §§ 32.56–5 and 32.60–10 of this chapter for limitations on the stowage of combustible liquids adjacent to ignition sources.