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§ 153.407 Special requirements for sounding tube gauges.

(a) A sounding tube installed as a restricted gauge must extend to within one meter (approx. 39.4 in.) of the bottom of the tank.

(b) A sounding tube must not be installed on a tank whose relief valve setting exceeds 28 kPa (approx. 4 psig) unless it is specifically permitted by the Commandant (G–MSO).

(c) A sounding tube must have no perforations in the tube wall.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

§ 153.408 Tank overflow control.

(a) When table 1 references this section, a cargo containment system must have a cargo high level alarm meeting § 153.409 and one of the following additional systems:

(1) A second high level (cargo overflow) alarm.

(2) A system that automatically stops cargo flow to the tank (automatic shutdown system).

(b) The high level alarm and the cargo overflow alarm or automatic shutdown system must:

(1) Be independent of one-another; and

(2) Operate on loss of power.

(c) The cargo overflow alarm or the automatic shutdown system must operate early enough to:

(1) Stop the loading operation before the cargo tank overflows; and

(2) Avoid surge pressures that exceed the working pressure specified in § 153.294(b).

(d) A tank overflow must be identified with the legend ''TANK OVERFLOW ALARM'' in lettering as specified for the warning sign in § 153.955.

(e) A tank overflow alarm must be audible and visible in that part of the deck where the containment systems are located and at the point where cargo loading is controlled on the tankship.

(f) The automatic shutdown system or tank overflow alarm must be able to be checked at the tank for proper operation (for example, by electrically simulating an overfill at the tank gauge connection).

(g) In this section, ''independent'' as applied to two systems means that one system will operate with a failure of any part of the other system except high level power sources and electrical feeder panels. Conduit need not be independent; the control wiring for several independent systems may be carried in a single conduit.

[CGD 81–078, 50 FR 21173, May 22, 1985]

§ 153.409 High level alarms.

When Table 1 refers to this section or requires a cargo to have a closed gauging system, the cargo's containment system must have a high level alarm:

(a) That gives an audible and visual alarm before the tank fills to 97 percent of its capacity;

(b) That can be seen and heard where cargo transfer is controlled and on the open deck;

(c) Whose operation can be checked prior to each loading; and

(d) That must be marked as described in § 153.408(c)(6) with the legend ''HIGH LEVEL ALARM.''

[CGD 78–128, 47 FR 21209, May 17, 1982; 47 FR 27293, June 24, 1982]

CARGO TEMPERATURE CONTROL SYSTEMS

§ 153.430 Heat transfer systems; general.

Each cargo cooling system required by this part and each cargo heating system must:

(a) Meet the standards of Subchapters F (Marine Engineering) and J (Electrical Engineering) of this chapter;

(b) Have valving that enables the system to be separated from all other cooling and heating systems; and

(c) Allow manual regulation of the system's heat transfer rate.

[CGD 73–96, 42 FR 49027, Sept. 26, 1977, as amended by CGD 78–128, 47 FR 21209, May 17, 1982; CGD 81–078, 50 FR 21174, May 22, 1985]

§ 153.432 Cooling systems.

(a) Each cargo cooling system must have an equivalent standby unit that is installed and that can be placed in operation immediately after failure of the primary cooling system.