Coast Guard, DHS

§ 153.438 Cargo pressure or temperature alarms required.

(a) Each refrigerated tank must have:
   (1) An alarm that operates when the cargo’s pressure exceeds the vapor pressure described in §153.371(b); or
   (2) An alarm that operates when the cargo’s temperature exceeds the steady

§ 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.
(b) Each tankship that has a cargo tank with a required cooling system must have a manual that contains:
   (1) A piping diagram for the cooling system; and
   (2) Instructions for changing over to the standby system described in paragraph (a) of this section.

§ 153.434 Heat transfer coils within a tank.

When a cargo tank contains any quantity of cargo, a cargo cooling or heating system having coils within the tank must keep the heat transfer fluid at a pressure greater than the pressure exerted on the heating or cooling system by the cargo.

§ 153.436 Heat transfer fluids: compatibility with cargo.

A heat transfer fluid separated from the cargo by only one wall (for example, the heat transfer fluid in a coil within a tank) must be compatible with the cargo under the standards prescribed for compatibility between two cargoes in Part 150 of this chapter.

§ 153.438 Cargo pressure or temperature alarms required.

(a) Each refrigerated tank must have:
   (1) An alarm that operates when the cargo’s pressure exceeds the vapor pressure described in §153.371(b); or
   (2) An alarm that operates when the cargo’s temperature exceeds the steady pressure.

§ 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.”

§ 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.

§ 153.408 Cargo temperature control systems

§ 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.
(b) Each tankship that has a cargo tank with a required cooling system must have a manual that contains:
   (1) A piping diagram for the cooling system; and
   (2) Instructions for changing over to the standby system described in paragraph (a) of this section.

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