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§ 154.1130 Sections.

(a) If a water spray system is divided into sections, each section must at least include the entire deck area bounded by the length of a cargo tank and the full beam of the vessel.

(b) If a water spray system is divided into sections, the control valves must be at a single manifold that is aft of the cargo area.

§ 154.1135 Pumps.

(a) Water to the water spray system must be supplied by:

(1) A pump that is only for the use of the system;

(2) A fire pump; or

(3) A pump specially approved by the Commandant (G–MSO).

(b) Operation of a water spray system must not interfere with simultaneous operation of the fire main system at its required capacity. There must be a valved cross-connection between the two systems.

(c) Except as allowed under paragraph (d) of this section, each pump for each water spray system must have the capacity to simultaneously supply all areas named in §154.1110.

(d) If the water spray system is divided into sections, the pump under paragraph (a) of this section must have the capacity to simultaneously supply the required discharge density under §154.1115(a) for:

(1) The areas in §§154.1110(f) through (h) and 154.1115(b); and

(2) The largest section that includes the required protection under §154.1110 (a), (b), and (c).

[CGD 74–289, 44 FR 26009, May 3, 1979, as amended by CGD 82–063b, 48 FR 4782, Feb. 3, 1983]

FIREFIGHTING SYSTEM: DRY CHEMICAL

§ 154.1140 Dry chemical system: General.

Each liquefied flammable gas carrier must have a dry chemical firefighting system that meets §§154.1145 through 154.1170, Part 56 and Subpart 162.039 of this chapter.

§ 154.1145 Dry chemical supply.

(a) A vessel with a cargo carrying capacity less that 1000 m^3 (35,300 $ft.^3$) must have at least one self-contained dry chemical storage unit for the cargo area with an independent inert gas pressurizing source adjacent to each unit.

(b) A vessel with a cargo carrying capacity of 1000 m^3 (35,300 $ft.^3$) or more must have at least two self-contained dry chemical storage units for the cargo area with an independent inert gas pressurizing source adjacent to each unit.

(c) A vessel with bow and stern loading and discharge areas must have at least one self-contained dry chemical storage unit with an independent inert gas pressurizing source adjacent to the unit for each area.

(d) Each dry chemical storage unit and associated piping must be designed for:

(1) Sequential discharge of each hose line and each monitor for 45 seconds; and

(2) Simultaneous discharge of all hose lines and monitors for 45 seconds.

(e) Each fully charged dry chemical storage unit must have the greater of the following:

(1) Enough dry chemical to provide for sequential discharge of each attached hose and monitor for 45 seconds.

(2) Enough dry chemical to provide for simultaneous discharge of all attached hoses and monitors for 45 seconds.

§ 154.1150 Distribution of dry chemical.

(a) All locations on the above deck cargo area and the cargo piping outside that cargo area must be protected by:

(1) At least two dry chemical hand hose lines; or

(2) At least one dry chemical hand hose line and one dry chemical monitor.

(b) At least one dry chemical storage unit and hand hose line or monitor must be at the after end of the cargo areas.

(c) Each cargo loading and discharge manifold must be protected by at least one dry chemical monitor.

§ 154.1155 Hand hose line: Coverage.

The coverage for the area for a hand hose line under §154.1150 must not exceed the length of the hand hose line except the coverage for the protection

of areas that are inaccessible to personnel must not exceed one-half the projection of the hose at its rated discharge, or 10 m (32.8 ft.), whichever is less.

§154.1160 Monitor coverage of system.

The coverage of each dry chemical system monitor under §154.1150 must not exceed:

(a) 10 m (32.8 ft.) at 10 kg/sec (22 lb/sec);

(b) 30 m (98.4 ft.) at 25 kg/sec (55 lb/sec);

(c) 40 m (131.2 ft.) at 45 kg/sec (99 lb/sec);

(d) An interpolation between 10 m (32.8 ft.) at 10 kg/sec (22 lb/sec) and 30 m (98.4 ft.) at 25 kg/sec (55 lb/sec); or

(e) An interpolation between 30 m (98.4 ft.) at 25 kg/sec (55 lb/sec) and 40 m (131.2 ft.) at 45 kg/sec (99 lb/sec).

§154.1165 Controls.

(a) Each dry chemical hand hose line must be one that can be actuated at its hose reel or hose storage cabinet.

(b) Each dry chemical monitor must be one that can be actuated and controlled at the monitor.

(c) A dry chemical monitor for the cargo loading and discharging manifold areas must be one that can be:

(1) Actuated from a location other than the monitor and manifold area; and

(2) Except for pre-aimed monitors, controlled from a location other than the monitor and manifold area.

(d) Each dry chemical storage unit must have independent piping with a stop valve in the piping for each remote hand hose line and remote monitor where the piping connects to the storage container, if the unit has:

(1) More than one hand hose line;

(2) More than one monitor; or

(3) A combination of hand hose lines and monitors.

(e) Each stop valve under paragraph (d) of the section must be capable of:

(1) Manual operation; and

(2) Being opened from the hose reel or monitor to which it is connected.

(f) Damage to any dry chemical system hose, monitor, pipe or control circuits must not prevent the operation of other hoses, monitors, or control circuit that are connected to the same storage unit.

§154.1170 Hand hose line: General.

Each dry chemical hand hose line must:

(a) Not be longer than 33m (108 ft.);

(b) Be stored on a hose reel or in a hose cabinet and be one that is operable whether or not it is unwound from a hose reel or removed from a hose cabinet;

(c) Be non-kinkable;

(d) Have a nozzle with a valve to start and stop the flow of chemical;

(e) Have a capacity of at least 3.5 kg/sec (7.7 lb./sec); and

(f) Be one that can be operated by one person.

CARGO AREA: MECHANICAL VENTILATION SYSTEM

§154.1200 Mechanical ventilation system: General.

(a) Each cargo compressor room, pump room, gas-dangerous cargo control station, and space that contains cargo handling equipment must have a fixed, exhaust-type mechanical ventilation system.

(b) The following must have a supply-type mechanical ventilation system:

(1) Each space that contains electric motors for cargo handling equipment.

(2) Each gas-safe cargo control station in the cargo area.

(3) Each gas-safe space in the cargo area.

(4) Each space that contains inert gas generators, except main machinery spaces.

§154.1205 Mechanical ventilation system: Standards.

(a) Each exhaust type mechanical ventilation system required under §154.1200 (a) must have ducts for vapors from the following:

(1) The deck level.

(2) Bilges.

(3) If the vapors are lighter than air, the top of each space that personnel enter during cargo handling operations.

(b) The discharge end of each duct under paragraph (a) of this section must be at least 10 m (32.8 ft.) from