

or their fuel oil units, valves, or manifolds in the line between the settling tanks and the boilers.

(e) Fire extinguishing systems shall be provided for internal combustion installations in accordance with the following:

(1) If a fixed fire-extinguishing system is installed to protect an internal combustion propelling machinery installation, the system shall be of the carbon dioxide type.

(2) On vessels of 1,000 gross tons and over on an international voyage, the construction or conversion of which is contracted for on or after May 26, 1965, a fixed carbon dioxide system shall be installed in all spaces containing internal combustion or gas turbine main propulsion machinery, auxiliaries with an aggregate power of 1,000 b. hp. or greater, or their fuel oil units, including purifiers, valves, and manifolds.

(3) On vessels, the construction, conversion or automation of which is contracted for on or after July 1, 1968, the systems shall be in accordance with the following:

(i) A fixed carbon dioxide system shall be installed in any space containing machinery using fuel having a flashpoint of less than 110° F.

(ii) On vessels of 1,000 gross tons and over, a fixed carbon dioxide system shall be installed in all spaces containing internal combustion or gas turbine main propulsion machinery, auxiliaries with an aggregate power of 1,000 b. hp. or greater, or their fuel oil units, including purifiers, valves, and manifolds.

(f) On vessels contracted for on or after November 19, 1952, where an enclosed ventilating system is installed for electric propulsion motors or generators, a fixed carbon dioxide extinguishing system shall be installed in such system.

[CGFR 65-50, 30 FR 17001, Dec. 30, 1965, as amended by CGFR 66-33, 31 FR 15285, Dec. 6, 1966; CGFR 67-90, 33 FR 1016, Jan. 26, 1968; CGD 95-027, 61 FR 26006, May 23, 1996]

§ 95.05-15 Hand portable fire extinguishers and semiportable fire extinguishing systems.

(a) Approved hand portable fire extinguishers and semiportable fire extinguishing systems shall be installed on

all vessels, other than unmanned barges and fishing vessels, as set forth in subpart 95.50.

Subpart 95.10—Fire Main System, Details

§ 95.10-1 Application.

(a) The provisions of this subpart, with the exception of § 95.10-90, shall apply to all fire main installations contracted for on or after May 26, 1965. Installations contracted for prior to May 26, 1965, shall meet the requirements of § 95.10-90.

§ 95.10-5 Fire pumps.

(a) Vessels shall be equipped with independently driven fire pumps in accordance with Table 95.10-5(a).

TABLE 95.10-5(a)

Gross tons		Minimum number of pumps	Hose and hydrant size, inches	Nozzle orifice size, inches	Length of hose feet
Over	Not over				
	100	1	1 1/2	1 1/2	150
100	1,000	1	1 1/2	5/8	50
1,000	1,500	2	1 1/2	5/8	50
1,500	2	2 1/2	2 7/8	250

¹On vessels of 65 feet in length or less, 3/4-inch hose of good commercial grade together with a commercial garden hose nozzle may be used. The pump may be hand operated and the length of hose shall be sufficient to assure coverage of all parts of the vessel.

²75 feet of 1 1/2-inch hose and 5/8-inch nozzle may be used where specified by § 95.10-10(b) for interior locations and 50 feet of 1 1/2-inch hose may be used in exterior locations on vessels in other than ocean or coastwise service.

(b) On vessels of 1,000 gross tons and over on an international voyage, each required fire pump, while delivering water thru the fire main system at a pressure corresponding to that required by paragraph (c) of this section, shall have a minimum capacity of at least two-thirds of that required for an independent bilge pump. However, in no case shall the capacity of each fire pump be less than that otherwise required by this section.

(c) Each pump shall be capable of delivering water simultaneously from the two highest outlets at a Pitot tube pressure of approximately 50 p.s.i. Where 1 1/2-inch hose is permitted in lieu of 2 1/2-inch hose by footnote 2 of Table 95.10-5(a), the pump capacity shall be determined on the same basis as if 2 1/2-inch hose had been permitted. Where 3/4-inch hose is permitted by Table

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95.10-5(a), the Pitot tube pressure need be only 35 p.s.i.

(d) Fire pumps shall be fitted on the discharge side with relief valves set to relieve at 25 p.s.i. in excess of the pressure necessary to maintain the requirements of paragraph (c) of this section or 125 p.s.i., whichever is greater. Relief valves may be omitted if the pumps, operating under shut-off conditions, are not capable of developing a pressure exceeding this amount.

(e) Fire pumps shall be fitted with a pressure gage on the discharge side of the pumps.

(f) Fire pumps may be used for other purposes provided at least one of the required pumps is kept available for use on the fire system at all times. In no case shall a pump having connection to an oil line be used as a fire pump. Branch lines connected to the fire main for purposes other than fire and deck wash shall be so arranged that adequate water can be made continuously available for firefighting purposes.

(g) The total area of the pipes leading from a pump shall not be less than the discharge area of the pump.

(h) On vessels with oil fired boilers, either main or auxiliary, or with internal combustion propulsion machinery, where 2 fire pumps are required, they shall be located in separate spaces, and the arrangement of pumps, sea connections, and sources of power shall be such as to insure that a fire in any one space will not put all of the fire pumps out of operation. However, where it is shown to the satisfaction of the Commandant that it is unreasonable or impracticable to meet this requirement due to the size or arrangement of the vessel, or for other reasons, the installation of a total flooding carbon dioxide system may be accepted as an alternate method of extinguishing any fire which would affect the powering and operation of at least one of the required fire pumps.

[CGFR 65-50, 30 FR 17001, Dec. 30, 1965, as amended by CGFR 66-33, 31 FR 15285, Dec. 6, 1966; CGD 95-028, 62 FR 51206, Sept. 30, 1997]

§ 95.10-10 Fire hydrants and hose.

(a) The size of fire hydrants, hose, and nozzles and the length of hose required shall be as noted in Table 95.10-5(a).

(b) In lieu of the 2½-inch hose and hydrants specified in Table 95.10-5(a), on vessels over 1,500 gross tons, the hydrants in interior locations may have siamese connections for 1½-inch hose. In these cases the hose shall be 75 feet in length, and only one hose will be required at each fire station; however, if all such stations can be satisfactorily served with 50-foot lengths, 50-foot hose may be used.

(c) On vessels of 500 gross tons and over there must be at least one shore connection to the fire main available to each side of the vessel in an accessible location. Suitable cut-out valves and check valves must be provided. Suitable adapters also must be provided for furnishing the vessel's shore connections with couplings mating those on the shore fire lines. Vessels of 500 gross tons and over on an international voyage, must be provided with at least one international shore connection complying with ASTM F 1121 (incorporated by reference, see § 95.01-2). Facilities must be available enabling an international connection to be used on either side of the vessel.

(d) Fire hydrants shall be of sufficient number and so located that any part of the vessel, other than main machinery spaces, accessible to persons on board while the vessel is being navigated and all cargo holds may be reached with at least 2 streams of water from separate outlets, at least one of which shall be from a single length of hose. In main machinery spaces, all portions of such spaces shall be capable of being reached by at least 2 streams of water, each of which shall be from a single length of hose from separate outlets; however, this requirement need not apply to shaft alleys containing no assigned space for the stowage of combustibles. Fire hydrants shall be numbered as required by § 97.37-15 of this subchapter.

(e) All parts of the fire main located on exposed decks shall either be protected against freezing or be fitted with cut-out valves and drain valves so that the entire exposed parts of such piping may be shut off and drained in freezing weather. Except when closed to prevent freezing, such valves shall be sealed open.