Washington, DC 20593–0001 and is available from the sources indicated in paragraph (b) of this section.

(b) The material approved for incorporation by reference in this part and the sections affected are:

American Society for Testing and Materials (ASTM)

100 Barr Harbor Drive, West Conshohocken, PA 19428–2959.

ASTM F 1121–87 (1993), Standard Specification for International Shore Connections for Marine Fire Applications—193.10–10

National Fire Protection Association (NFPA)

1 Batterymarch Park, Quincy, MA 02269–9101.

NFPA 13–1996, Standard for the Installation of Sprinkler Systems—193.30–1

[CGD 88–032, 56 FR 35829, July 29, 1991, as amended by CGD 95–072, 60 FR 50469, Sept. 29, 1995; CGD 96–041, 61 FR 50735, Sept. 27, 1996; CGD 97–057, 62 FR 51051, Sept. 30, 1997; CGD 95–028, 62 FR 51220, Sept. 30, 1997; USCG–1999–6216, 64 FR 53229, Oct. 1, 1999; USCG–1999–5151, 64 FR 67186, Dec. 1, 1999]

§ 193.01–5 Equipment installed but not required.

(a) On all vessels, including non-self-propelled vessels of less than 300 gross tons, where fire detecting or extinguishing systems or equipment are not required, but are installed, the system or equipment and its installation shall meet the requirements of this part.

Subpart 193.05—Fire Detecting and Extinguishing Equipment, Where Required

§ 193.05–1 Fire detecting, manual alarm, and supervised patrol systems.

(a) Fire detecting, manual alarm, and supervised patrol systems are not required, but if installed, the systems shall meet the applicable requirements of part 76 of Subchapter H (Passenger Vessels) of this chapter.

§ 193.05–5 Fire main system.

(a) Fire pumps, hydrants, hose, and nozzles shall be installed on all manned vessels.

(b) Except as provided for in § 193.10–10(e), the fire main must be a pressurized or a remotely controlled system.

(c) The arrangements and details of the fire main system shall be as set forth in subpart 193.10.

[CGFR 67–83, 33 FR 1145, Jan. 27, 1968, as amended by CGD 75–031, 40 FR 48349, Oct. 15, 1975]

§ 193.05–10 Fixed fire extinguishing systems.

(a) Approved fire extinguishing systems shall be installed in those locations delineated in this section.

(b) A fixed carbon dioxide or other approved system shall be installed in all lamp and paint lockers, oil rooms, and similar spaces.

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

(1) Enclosed spaces containing gasoline engines shall have fixed carbon dioxide systems.

(2) If a fire extinguishing system is installed to protect an internal combustion or gas turbine installation, the system shall be of the carbon dioxide type.

(3) 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.

(d) A fixed carbon dioxide system shall be installed in all chemical storerooms.

(e) On vessels of 1,000 gross tons and over, a fixed carbon dioxide, or foam system shall be installed in all spaces containing oil fired boilers, either main or auxiliary, or their fuel oil units, valves, or manifolds in the line between the settling tanks and the boilers. The arrangement and details of the foam system shall be as set forth in part 95 of Subchapter I (Cargo and Miscellaneous Vessels) of this chapter.

(f) 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.

(g) The arrangements and details of the fixed carbon dioxide extinguishing

systems shall be as set forth in subpart 193.15.

(h) Additional specific requirements for fire extinguishing systems for spaces containing explosives and other dangerous articles or substances are in part 194 of this subchapter.

§ 193.05–15 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 manned vessels as set forth in subpart 193.50.

Subpart 193.10—Fire Main System, Details

§ 193.10–1 Application.

(a) The provisions of this subpart, with the exception of §193.10–90, shall apply to all vessels contracted for on or after March 1, 1968.

(b) Vessels contracted for prior to March 1, 1968, shall meet the requirements of §193.10–90.

§ 193.10–5 Fire pumps.

(a) Vessels shall be equipped with independently driven fire pumps in accordance with Table 193.10–5(a).

TABLE 193.10–5(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] 1½	[1] ½	50
100	1,000	1	1½	⅝	50
1,000	1,500	2	1½	⅝	50
1,500	.....	2	[2] 2½	[2] ⅞	[2] 50

[1] On vessels of 65 feet in length or less, ¾-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.

[2] 75 feet of 1½-inch hose and ⅝-inch nozzle may be used where specified by §193.10–10(b) for interior locations and 50 feet 1½-inch hose may be used in exterior locations on vessels in other than ocean or coastwise services.

(b) On vessels of 1,000 gross tons and over on an international voyage, each required fire pump, while delivering water through 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 must be capable of delivering water simultaneously from the outlets having the greatest pressure drop from the five pumps to the nozzles which may not always be the two highest outlets, at a Pitot tube pressure of not less than 50 p.s.i. Where 1½-inch hose is permitted in lieu of 2½-inch hose by footnote 2 of Table 193.10–5(a), the pump capacity shall be determined on the same basis as if 2½-inch hose had been permitted. Where ¾-inch hose is permitted by Table 193.10–5(a), the Pitot tube pressure may not be less than 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 shutoff 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, 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