

§ 167.45-40 Fire-fighting equipment on nautical school ships using oil as fuel.

Steam-propelled nautical school ships burning oil for fuel shall be fitted with the fire-fighting equipment of the following type and character:

(a) In each boiler room and in each of the machinery spaces of a nautical school ship propelled by steam, in which a part of the fuel-oil installation is situated, 2 or more approved fire extinguishers of the foam type of not less than 9.5 liters (2½ gallons) each or 2 or more approved fire extinguishers of the carbon dioxide type of not less than 33 kilograms (15 pounds) each must be placed where accessible and ready for immediate use. On a nautical school ship of 1,000 gross tons and under, only 1 of the fire extinguishers may be required.

(b) In boiler and machinery spaces, at least 2 fire hydrants must have a fire-hose of a length that allows each part of the boiler and machinery spaces to be reached by water from a combination solid stream and water spray fire-hose nozzle.

(c) Each firehose under paragraph (b) of this section must have a combination solid stream and water spray fire-hose nozzle that meets subpart 162.027 of this chapter. Combination nozzles and low-velocity water spray applicators previously approved under subpart 162.027 of this chapter may remain so long as they are maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection.

(d) On every steam propelled nautical school ship of over 1,000 gross tons having one boiler room there shall be provided one fire extinguisher of the foam type of at least 40 gallons rated capacity or one carbon dioxide (CO₂) extinguisher of at least 100 pounds. If the nautical school ship has more than one boiler room, an extinguisher of the above type shall be provided in each boiler room. On every steam propelled nautical school ship of 1,000 gross tons and under, foam type fire extinguishers of at least 20 gallons rated capacity or carbon dioxide (CO₂) extinguishers of at least 50 pounds shall be used. Extinguishers fitted shall be equipped with suitable hose and nozzles on reels or other practicable means easy of access,

and of sufficient length to reach any part of the boiler room and spaces containing oil-fuel pumping units.

(e) All nautical school ships propelled by internal-combustion engines shall be equipped with the following foam type or carbon dioxide type fire extinguishers in the machinery spaces:

(1) One approved 12-gallon foam-type extinguisher or one approved 35-pound carbon dioxide type extinguisher.

(2) One approved 2½-gallon foam-type, or one approved 15-pound carbon dioxide type extinguisher for each 1,000 B. H. P. of the main engines, or fraction thereof. The total number of fire extinguishers carried shall not be less than two and need not exceed six.

(3) When a donkey boiler fitted to burn oil as fuel is located in the machinery space, there shall be substituted for the 12-gallon foam type or 35-pound carbon dioxide type fire extinguisher required either one 40-gallon foam type or one 100-pound carbon dioxide type fire extinguisher.

(f) In this section any reference to an approved fire extinguisher means either approved by the Coast Guard or the Navy.

[CGFR 51-11, 16 FR 3218, Apr. 12, 1951, as amended by CGD 76-086, 44 FR 2394, Jan. 11, 1979; CGD 95-027, 61 FR 26010, May 23, 1996]

§ 167.45-45 Carbon dioxide fire-extinguishing system requirements.

(a) When a carbon dioxide (CO₂) smothering system is fitted in the boiler room, the quantity of carbon dioxide carried shall be sufficient to give a gas saturation of 25 percent of the gross volume of the largest boiler room from tank top to top of the boilers. Top of the boilers is to be considered as the top of the shell of a Scotch or leg type of boiler, and the top of the casing or drum, whichever is the higher, on water-tube boilers. The quantity of carbon dioxide required may be determined approximately by the following formula:

$$W = \frac{L \times B \times D}{36} \quad (1)$$

where:

W=the weight of CO₂ required in pounds.

L=the length of the boiler room in feet.

B=the breadth of the boiler room in feet.

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D=the distance in feet from tank top or flat forming lower boundary to top of boilers.

(b) When a carbon dioxide (CO₂) smothering system is fitted in the machinery space of a nautical school ship propelled by internal combustion engines, the quantity of carbon dioxide required may be determined approximately by the following formula:

$$W = \frac{L \times B \times D}{22} \quad (2)$$

where:

W=the weight of CO₂ required in pounds.

L=the length of machinery space in feet.

B=breadth of the machinery space in feet.

D=distance in feet from tank top or flat forming lower boundary to the underside of deck forming the batch opening.

(c) The whole charge of gas shall be capable of being released simultaneously by operating one valve and control. All cylinders shall be completely discharged in not more than two minutes. The arrangement of the piping shall be such as to give a general and fairly uniform distribution over the entire area protected. An alarm which shall operate automatically with the operation of the system shall be provided to give a warning in the space when the carbon dioxide is about to be released. Provision shall be made to prevent the admission of air into the lower parts of the boiler or engine room while the system is in operation.

§ 167.45-50 Foam smothering system requirements.

(a) When a foam-type system is fitted, its capacity shall be such as to rapidly discharge over the entire area of the bilge (tank top) of the largest boiler room a volume of foam 6 inches deep in not more than 3 minutes. The arrangement of piping shall be such as to give a uniform distribution over the entire area protected.

(b) The foam-type system may be of a type approved by the Navy or Coast Guard. All containers and valves by which the system is operated shall be easily accessible and so placed that control valves and containers will not readily be cut off from use by an outbreak of fire.

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§ 167.45-60 Emergency breathing apparatus and flame safety lamps.

Each nautical-school ship must be equipped with the following devices:

(a) Two pressure-demand, open circuit, self-contained breathing apparatus, approved by the Mine Safety and Health Administration (MSHA) and by the National Institute for Occupational Safety and Health (NIOSH) and having at a minimum a 30-minute air supply, a full face piece, and a spare charge for each. A self-contained compressed-air breathing apparatus previously approved under part 160, subpart 160.011, of this chapter may continue in use as required equipment if it was part of the vessel's equipment on November 23, 1992, and as long as it is maintained in good condition to the satisfaction of the Officer in Charge, Marine Inspection.

(b) One flame safety lamp approved by the Coast Guard or Navy.

[CGD 86-036, 57 FR 48326, Oct. 23, 1992, as amended by CGD 95-028, 62 FR 51217, Sept. 30, 1997]

§ 167.45-65 Portable fire extinguishers in accommodation spaces.

(a) All nautical school ships shall be provided with such number of good and efficient portable fire extinguishers approved by the Navy or Coast Guard as follows:

(1) Nautical school ships less than 150 feet in length shall have at least two fire extinguishers on each passenger deck.

(2) Nautical school ships 150 feet and over in length shall be provided with at least one fire extinguisher for every 150 linear feet of corridor length or fraction thereof in the spaces occupied by passengers and crew.

(3) In all public spaces fire extinguishers shall be located not more than 150 feet apart.

(b) The number of required fire extinguishers is based on the capacity of the ordinary fire extinguisher, which is about 2½ gallons, and no fire extinguisher of larger capacity shall be allowed a greater rating than that of the ordinary fire extinguisher. Fire extinguishers of approved types of less capacity are allowable when their total contents equal the required quantity.