

**§ 28.810 Deck rails, lifelines, storm rails and hand grabs.**

(a) Except as otherwise provided in paragraph (d) of this section, deck rails, lifelines, grab rails, or equivalent protection must be installed near the periphery of all weather decks accessible to individuals. Where space limitations make deck rails impractical, hand grabs may be substituted.

(b) The height of deck rails, lifelines, or bulkheads must be at least 1 meter (39½ inches) from the deck, except where this height will interfere with the normal operation of the vessel, a lesser height may be substituted.

(c) All deck rails or lifelines must be permanently supported by stanchions at intervals of not more than 2.3 meters (7 feet). Stanchions must be through bolted or welded to the deck.

(d) Portable stanchions and lifelines may be installed in locations where permanently installed deck rails will impede normal cargo operations or emergency recovery operations.

(e) Deck rails or lifelines must consist of evenly spaced courses. The spacing between courses must not be greater than 0.38 meters (15 inches). The opening below the lowest course must not be more than 0.23 meters (9 inches). Lower courses are not required where all or part of the space below the upper rail is fitted with a bulwark, chain link fencing, wire mesh, or an equivalent.

(f) A suitable storm rail or hand grab must be installed where necessary in a passageway, at a deckhouse side, at a ladder, and a hatch where an individual might have access.

**§ 28.815 Bilge pumps, bilge piping, and dewatering systems.**

Instead of meeting the requirements of § 28.255, each vessel to which this subpart applies must meet the following requirements:

(a) Each vessel must be equipped with a fixed, self priming, powered, bilge pump, having a minimum capacity rating of 50 gallons per minute, connected to a bilge manifold and piping capable of draining any watertight compartment, other than tanks and small buoyancy compartments, under all service conditions. Large spaces, such as engine rooms and cargo holds

must be fitted with more than one suction line.

(b) In addition, each vessel must be fitted with a fixed secondary or backup bilge pump having an independent and separate source of power from the pump required in paragraph (a) of this section. One of the bilge pumps may be attached to the propelling engine.

(c) A portable bilge pump may substitute for the secondary pump required above, as long as it meets the following:

(1) It must be self priming and provided with a suitable suction hose of adequate length to reach the bilges of each watertight compartment it must serve and be fitted with a built-in check valve and strainer.

(2) The portable pump must be of at least the same minimum capacity as that listed in paragraph (a) of this section and fitted with a discharge hose of adequate length to ensure overboard discharge from the lowest compartment in which it can serve.

(3) The portable pump must also be capable of being quickly and efficiently attached to the vessel's fixed bilge suction main and/or discharge piping (such as with "camlocks", etc.) for alternate emergency use.

(d) Except for suction lines attached to an individual pump provided for a separate space, or for a portable pump, each individual bilge suction line must be provided with a stop valve at the manifold and a check valve at some accessible point in the bilge line to prevent unintended flooding of a space.

(e) Each bilge suction line and dewatering system must be fitted with a suitable strainer to prevent clogging of the suction line. Strainers must have an open area of not less than three times the open area of the suction line.

(f) Except for a fire pump required by 46 CFR 28.820, a bilge pump may be used for other purposes.

(g) Each vessel must comply with the oil pollution prevention requirements of 33 CFR parts 151 and 155.

**§ 28.820 Fire pumps, fire mains, fire hydrants, and fire hoses.**

(a) Each vessel must be equipped with a self-priming, power driven fire

pump connected to a fixed piping system. This pump must be capable of delivering an effective stream of water from a hose connected to the highest outlet. The minimum capacity of the power fire pump shall be 50 gallons per minute at a pressure of not less than 60 pounds per square inch at the pump outlet.

(1) If multiple pumps are installed, they may be used for other purposes provided at least one pump is kept available for use on the fire system at all times.

(2) In addition, each vessel must be fitted with a portable fire pump having a minimum capacity of that specified in paragraph (a) of this section, capable of producing a stream of water having a throw of at least 12 meters (39.4 feet) from the nozzle, and capable of being connected to National Standard Fire Hose of the size utilized on board the vessel. If a vessel already has on board a portable pump satisfying the bilge system requirements of § 28.760(c), no additional portable pump is required as long as the portable pump is of sufficient size/capacity, and is properly equipped to handle both fire fighting and flood control.

(b) Each vessel must have a sufficient number of fire hydrants to reach any part of the vessel using a single length of hose.

(c) Each fire hydrant must have at least one length of fire hose connected to the outlet at all times, a spanner, and a hose rack or other device for stowing the hose at all times.

(1) All parts of the firemain located on exposed decks shall either be protected against freezing or be fitted with cutout valves and drain valves.

(2) Firehose shall not be used for any other purpose other than fire extinguishing, drills, and testing.

(3) Each length of fire hose must be a minimum of 3.83 centimeters (1½") diameter lined commercial fire hose and be fitted with a nozzle made of corrosion resistant material capable of providing a solid stream and a spray pattern.

**§ 28.825 Excess fire detection and protection equipment.**

Instead of meeting the requirements of § 28.155, each vessel to which this

subpart applies must meet the following requirements:

(a) Installation of fire detection and protection equipment in excess of that required by the regulations in this Subchapter is permitted provided that the excess equipment does not endanger the vessel or individuals on board in any way. The excess equipment must, at a minimum, be listed and labeled by an independent, nationally recognized testing laboratory and be in accordance with an appropriate industry standard for design, installation, testing, and maintenance.

(b) An existing fixed gas fire extinguishing system that is in excess of the required fire protection equipment required by subparts A, B, and C of this part, may remain in place and continue in service as long as all parts of the system are maintained in good condition to the satisfaction of the Coast Guard Representative, and subject to the following:

(1) A fixed fire extinguishing system capable of automatic discharge upon heat detection, may only be installed in a normally unoccupied space. For the purpose of this section, the machinery space aboard a fish tender operating in the Aleutian trade is considered occupied.

(2) A fixed fire extinguishing system must:

(i) Be capable of manual actuation from outside the space protected;

(ii) Produce an audible alarm to indicate the discharge of the extinguishing agent for 20 seconds before the extinguishing agent is released into the space;

(iii) The branch line valves of all fire extinguishing systems shall be plainly and permanently marked indicating the spaces serviced;

(iv) The control cabinets or spaces containing valves or manifolds for the various fire extinguishing systems shall be distinctly marked in conspicuous red letters at least 5.08 centimeters (2 inches) high:

“HALON FIRE SYSTEM”  
 “CARBON DIOXIDE FIRE SYSTEM” or  
 “FOAM FIRE SYSTEM”, as the case may be;

(v) Instructions for the operation of the system must be located in a conspicuous place at or near all pull boxes,