

**§ 116.510**

**46 CFR Ch. I (10-1-06 Edition)**

of escape must be obvious, rapid, and of adequate strength. Handles and securing devices must be permanently installed and not capable of being easily removed. With the exception of individual staterooms, a door, hatch or scuttle must open towards the expected direction of escape from the space served.

(j) A means of escape that is not readily apparent to a person from both inside and outside the space must be adequately marked in accordance with § 122.606 of this subchapter.

(k) A ladder leading to a deck scuttle may not be used as a means of escape except:

(1) On a vessel of not more than 19.8 meters (65 feet) in length, a vertical ladder and a deck scuttle may be used as not more than one of the means of escape from a passenger accommodation space; or

(2) As not more than one of the means of escape from any crew accommodation space or work space.

(l) Each ladder used as a means of escape must be mounted at least 180 millimeters (7 inches) from the nearest permanent object in back of the ladder. Rungs must be:

(1) At least 405 millimeters (16 inches) in width; and

(2) Not more than 305 millimeters (12 inches) apart, and uniformly spaced for the length of the ladder with at least 113 millimeters (4.5 inches) clearance above each rung.

(m) When a deck scuttle serves as a means of escape, it must not be less than 455 millimeters (18 inches) in diameter and must be fitted with a quick acting release and a holdback device to hold the scuttle in an open position.

(n) Footholds, handholds, ladders, and similar means provided to aid escape, must be suitable for use in emergency conditions, of rigid construction, and permanently fixed in position, unless they can be folded, yet brought into immediate service in an emergency.

(o) On a vessel of not more than 19.8 meters (65 feet) in length, a window or windshield of sufficient size and proper accessibility may be used as one of the required means of escape from an enclosed space, provided it:

(1) Does not lead directly overboard;

(2) Can be opened or is designed to be kicked or pushed out; and

(3) Is suitably marked.

(p) Only one means of escape is required from a space where:

(1) The space has a deck area less than 30 square meters (322 square feet);

(2) There is no stove, heater, or other source of fire in the space;

(3) The means of escape is located as far as possible from a machinery space or fuel tank; and

(4) If an accommodation space, the single means of escape does not include a deck scuttle or a ladder.

(q) Alternative means of escape from spaces may be provided if acceptable to the Commanding Officer, Marine Safety Center.

[CGD 85-080, 61 FR 900, Jan. 10, 1996; 61 FR 20556, May 7, 1996, as amended by CGD 97-057, 62 FR 51047, Sept. 30, 1997; CGD 85-080, 62 FR 51350, Sept. 30, 1997; 62 FR 64305, Dec. 5, 1997; USCG 1998-4442, 63 FR 52191, Sept. 30, 1998]

**§ 116.510 Embarkation stations.**

(a) A vessel must have at least two designated embarkation stations on the embarkation deck of each main vertical zone, and at least one on each side of the vessel.

(b) Embarkation stations and approaches thereto must:

(1) Be areas that are easily traversed;

(2) Be provided with handholds; and

(3) Be well illuminated.

(c) Each embarkation station must be arranged to allow the safe boarding of survival craft. They must not be located in areas where rolling of the vessel could cause contact between the propeller(s) and survival craft. Bulwarks, handrails, and lifelines must be fitted with openings that are normally closed but that may be opened while survival craft are being boarded, allowing passengers to pass through rather than climb over.

[CGD 85-080, 61 FR 900, Jan. 10, 1996, as amended by CGD 97-057, 62 FR 51047, Sept. 30, 1997]

**§ 116.520 Emergency evacuation plan.**

The owner or managing operator shall prepare an evacuation plan that must:

(a) Identify possible casualties involving fires or flooding, including a

fire in the largest capacity passenger space in each main vertical zone;

(b) Provide procedures for evacuating all affected spaces for each casualty identified as required by paragraph (a) of this section without abandoning the vessel, including—

(1) Identify readily accessible areas of refuge for the maximum number of persons allowed aboard the vessel. The capacity for an area of refuge may not exceed the number of persons specified in §116.438(n)(2) of this part, except that one person may be permitted for each 0.28 square meters (3 square feet) of deck area; and

(2) Identify at least two means of escape complying with §114.400 from the space being evacuated; and

(c) Include procedures to evacuate passengers from the vessel using an abandon ship plan, considering the number of passengers and the vessel's route. The abandon ship plan must identify at least one escape route from each area of refuge to each embarkation station required by §116.510 of this part.

[CGD 85-080, 61 FR 900, Jan. 10, 1996, as amended at 62 FR 51350, Sept. 30, 1997; USCG 1998-4442, 63 FR 52191, Sept. 30, 1998]

#### § 116.530 Fire control plan.

A fire control plan must be posted on the vessel in a location that is accessible and visible to all passengers. The plan must show escape routes, areas of refuge, embarkation stations, the location of fire protection/emergency equipment, compartment titles and hazard classification of accommodation and service spaces, and structural fire protection boundaries.

### Subpart F—Ventilation

#### § 116.600 Ventilation of enclosed and partially enclosed spaces.

(a) An enclosed or partially enclosed space within a vessel must be adequately ventilated in a manner suitable for the purpose of the space.

(b) A power ventilation system must be capable of being shut down from the pilot house.

(c) An enclosed passenger or crew accommodation space and any other space occupied by a crew member on a regular basis must be ventilated by a

power ventilation system unless natural ventilation in all ordinary weather conditions is satisfactory to the OCMI.

(d) An exhaust duct over a frying vat or a grill must be at least 11 U.S. Standard Gauge (USSG) steel.

[CGD 85-080, 61 FR 900, Jan. 10, 1996, as amended at 62 FR 51350, Sept. 30, 1997]

#### § 116.610 Ventilation ducts.

(a) For the purposes of this section, a ventilation duct includes any type of piping, chamber, or conduit used for ventilation.

(b) A ventilation duct, and materials incidental to its installation, must be made of noncombustible material.

(c) Combustibles and other foreign materials are not allowed within ventilation ducts. However, metal piping and electrical wiring installed in a metal protective enclosure may be installed within ventilation ducts, provided that the piping or the wiring does not interfere with the operation of fire dampers. Electrical wiring and piping may not be installed in an exhaust duct over a frying vat or grill.

(d) Suitable means, such as a manual damper, automatic damper, or vent cover, must be provided in an accessible location outside the space served by the ventilation duct for shutting off the passage of air through the ventilation duct in the event of fire.

(e) A ventilation duct must not serve more than one main vertical zone; penetrations of main vertical zones must be minimized.

(f) A ventilation duct penetrating an A-Class or B-Class fire control boundary must meet the following requirements:

(1) A ventilation duct must meet the same requirements relative to the passage of smoke and flame as the fire control boundary penetrated;

(2) A steel duct penetrating an A-Class fire control boundary must be of at least 11 USSG, and a steel duct penetrating a B-Class bulkhead or deck must be of at least 16 USSG;

(3) A duct penetrating a main vertical zone bulkhead must be fitted with an automatic fire damper at the main vertical zone bulkhead;

(4) A duct penetrating an A-Class fire control boundary and opening into a