must meet the requirements of §169.323.

(b) A fire detector, listed by a recognized testing laboratory, must be installed in each unmanned engine space.

(c) Smoke detectors, listed by a recognized testing laboratory, must be installed in each berthing compartment, sail locker, and public area.

(d) Internal combustion engine exhausts, boiler and galley uptakes, and similar sources of ignition must be kept clear of and suitably insulated from any woodwork or other combustible matter.

(e) Lamp, paint, oil lockers and similar compartments must be constructed of metal or wholly lined with metal.

[CGD 83-005, 51 FR 897, Jan. 9, 1986; 51 FR 3785, Jan. 30, 1986]

§ 169.313 Means of escape.

(a) Except as provided by paragraph (f) of this section, there must be at least two means of escape from all areas generally accessible to persons onboard. At least one means of escape must be independent of watertight doors and lead directly to the open deck. Windows and windshields of sufficient size and proper accessibility may be used as one avenue of escape.

(b) The two means of escape must be as widely separated as practical to minimize the possibility of one incident blocking both escapes.

(c) Except as provided by paragraph (d) of this section, a vertical ladder and deck scuttle may not be designated as one of the means of escape.

(d) A vertical ladder and deck scuttle may be used as a second means of escape if—

1. The primary means of escape is an enclosed stairtower or stairway;
2. The installation of two stairways is impracticable;
3. The scuttle is located where it can not be interfered with; and
4. The scuttle is fitted with a quick-acting release and a hold-back to hold the scuttle in an open position.

(e) The required means of escape must not have locking devices.

(f) Where the length of the compartment is less than 12 feet, one vertical means of escape is acceptable provided that—

1. There is no source of fire in the space, such as a galley stove, heater, etc., and the vertical escape is remote from the engine or fuel tank space, and
2. The arrangement is such that the installation of two means of escape does not materially improve the safety of the vessel or those on board.

(g) Dead end corridors or the equivalent, more than 40 feet in length are prohibited.

(h) Each means of escape must be of adequate size to accommodate rapid evacuation.

1. Each vertical ladder must have rungs that are:
   1. At least 16 inches in length;
   2. Not more than 12 inches apart, uniform for the length of the ladder;
   3. At least 3 inches from the nearest permanent object in back of the ladder; and
   4. Except when unavoidable obstructions are encountered, there must be at least 4½ inches clearance above each rung.

§ 169.315 Ventilation (other than machinery spaces).

(a) All enclosed spaces within the vessel must be properly ventilated in a manner suitable for the purpose of the space.

(b) A means must be provided to close off all vents and ventilators.

(c) Living spaces must be ventilated by a mechanical system unless it can be shown that a natural system will provide adequate ventilation in all ordinary weather conditions. Provided that paragraph (a) of this section is satisfied, a vessel having only a natural ventilation system must satisfy the following: \( \frac{V}{A} \geq 1.4 \) where \( V \) is the total area of the vents in square inches and \( A \) is the product in square feet of the vessel’s design waterline length times its maximum beam.

Living Spaces

§ 169.317 Accommodations.

(a) Quarters must have sufficient fresh air, light and heat. Quarters must not be located forward of the collision bulkhead or farther forward in the vessel than a vertical plane located at 5 percent of the vessel’s loadline length abaft the forward side of the stem. The