§ 170.200 Estimated lightweight vertical center of gravity.

(a) Each tank vessel that does not carry a material listed in either Table 1 of part 153 or Table 4 of part 154 of this chapter may comply with this section in lieu of §170.175 if it—

1. Is 150 gross tons or greater;
2. Is of ordinary proportions and form;
3. Has a flush weather deck, one or more longitudinal bulkheads, and no independent tanks; and
4. Is designed not to carry cargo above the freeboard deck.

(b) When doing the calculations required by §§170.170 and 172.065, the vertical center of gravity of a tank vessel in the lightweight condition must be assumed to be equal to the following percentage of the molded depth of the vessel measured from the keel amidship:

1. For a tank ship—70%.
2. For a tank barge—60%.

(c) As used in this section, molded depth has the same meaning that is provided for the term in §42.13-15(e) of this chapter.


Subpart G—Special Installations

§ 170.235 Fixed ballast.

(a) Fixed ballast, if used, must be—

1. Installed under the supervision of the OCMI; and
2. Stowed in a manner that prevents shifting of position.

(b) Fixed ballast may not be removed from a vessel or relocated unless approved by the Coast Guard Marine Safety Center. However, ballast may be temporarily moved for vessel examination or repair if done under the supervision of the OCMI.


§ 170.245 Foam flotation material.

(a) Installation of foam must be approved by the OCMI.

(b) If foam is used to comply with §171.070(d), §171.095(c), or §173.063(e) of this subchapter, the following applies:

1. Foam may be installed only in void spaces that are free of ignition sources.
2. The foam must comply with NPFC MIL–P–21929B (incorporated by reference; see 46 CFR 170.015), including the requirements for fire resistance.
3. A submergence test must be conducted for a period of at least 7 days to demonstrate whether the foam has adequate strength to withstand a hydrostatic head equivalent to that which would be imposed if the vessel were submerged to its margin line.
4. The effective buoyancy at the end of the submergence test must be used as the buoyancy credit; however, in no case will a credit greater than 55 lbs per cubic foot (881 kilograms per cubic meter) be allowed.
5. The structure enclosing the foam must be strong enough to accommodate the buoyancy of the foam.
6. Piping and cables must not pass through foamed spaces unless they are within piping and cable trunks accessible from both ends.
7. Sample specimens must be prepared during installation and the density of the installed foam must be determined.
8. Foam may be installed adjacent to fuel tanks if the boundary between the tank and space has double continuous fillet welds.
9. MIL–P–21929B is incorporated by reference into this part.
10. The results of all tests and calculations must be submitted to the OCMI.
11. Blocked foam must—

1. Be used in each area that may be exposed to water; and
(i) Have a protective cover approved by the OCMI.


Subpart H—Watertight Bulkhead Doors

§ 170.248 Applicability.

(a) Except as provided in paragraphs (b) through (d) of this section, this subpart applies to vessels with watertight doors in bulkheads that have been made watertight to comply with the flooding or damage stability regulations in this subchapter.

(b) A watertight door on a MODU must comply with §174.100 of this subchapter.

(c) A watertight door on a self-propelled hopper dredge with a working freeboard must comply with §174.335 of this subchapter.

(d) Unless permitted otherwise, each vessel constructed on or after January 1, 2009 and issued a SOLAS Passenger Ship Safety Certificate or a SOLAS Cargo Ship Safety Construction Certificate must comply with the applicable regulations of IMO Res. MSC.216(82) in addition to the requirements of this subpart (IMO Res. MSC.216(82) incorporated by reference, see §170.015).


§ 170.250 Types and classes.

(a) Watertight doors, except doors between cargo spaces, are classed as follows:

(1) Class 1—Hinged door.

(2) Class 2—Sliding door, operated by hand gear only.

(3) Class 3—Sliding door, operated by power and by hand gear.

(b) The following types of watertight doors are not permitted:

(1) A plate door secured only by bolts; and

(2) A door required to be closed by dropping or by the action of dropping weights.

(c) Whenever a door of a particular class is prescribed by these regulations, a door of a class bearing a higher number may be used.

§ 170.255 Class 1 doors; permissible locations.

(a) Except as provided in paragraphs (b) and (c) of this section, Class 1 doors within passenger, crew, and working spaces are permitted only above a deck, the molded line of which, at its lowest point at side, is at least 7 feet (2.14 meters) above the deepest load line.

(b) Class 1 doors are permitted within passenger, crew, and working spaces, wherever located, if—

(1) In the judgment of the OCMI, the door is in a location where it will be closed at all times except when actually in use; and

(2) The vessel is less than 150 gross tons and will not proceed more than 20 nautical miles (37 kilometers) from shore; or

(3) The vessel is in rivers or lakes, bays, and sounds service.

(c) Class 1 doors are permitted in any location on a vessel that—

(1) Is less than 100 gross tons; and

(2) Will operate only in the offshore oil industry trade.

(d) Quick-acting Class 1 doors are permitted in any location on a vessel that operates on the Great Lakes and is required to meet the damage stability standards of subpart H of part 172 of this chapter.

(e) For vessels required to meet the damage stability standards of subpart H of this chapter, when Class 1 doors are installed below a deck the molded line of which at its lowest point at side is less than 7 feet (2.14 meters) above the deepest load line, an indicator light for each door which warns when the door is open must be installed on the bridge.


§ 170.260 Class 2 doors; permissible locations.

(a) Except as provided in paragraphs (b) and (c) of this section, a Class 2 door is permitted only if—

(1) Its sill is above the deepest load line; and