§ 174.065 Damage stability requirements.

(a) Each unit must be designed so that, while in each of its normal operating conditions and severe storm conditions, its final equilibrium waterline would remain below the lowest edge of any opening through which additional flooding could occur if the unit were subjected simultaneously to—

(1) Damage causing flooding described in §§174.075 through 174.085; and

(2) A wind heeling moment calculated in accordance with §174.055(b) using a wind velocity of 50 knots (25.8 meters per second).

(b) Each unit must have a means to close off each pipe, ventilation system, and trunk in each compartment described in §174.080 or §174.085 if any portion of the pipe, ventilation system, or trunk is within 5 feet (1.5 meters) of the hull.

§ 174.070 General damage stability assumptions.

For the purpose of determining compliance with §174.065, the assumptions are made that during flooding and the resulting change in the unit’s waterline—

(a) The unit is not anchored or moored; and

(b) No compartment on the unit is ballasted or pumped out to compensate for the flooding described in §§174.075 through 174.085.

§ 174.075 Compartments assumed flooded: general.

The individual flooding of each of the compartments described in §§174.080 and 174.083 must be assumed for the purpose of determining compliance
Coast Guard, DHS § 174.100

§ 174.080Flooding on self-elevating and surface type units.

(a) On a surface type unit or self-elevating unit, all compartments within 5 feet (1.5 meters) of the hull of the unit between two adjacent main watertight bulkheads, the bottom shell, and the uppermost continuous deck or first superstructure deck where superstructures are fitted must be assumed to be subject to simultaneous flooding.

(b) On the mat of a self-elevating unit, all compartments of the mat must be assumed to be subject to individual flooding.

§ 174.085Flooding on column stabilized units.

(a) Watertight compartments that are outboard of, or traversed by, a plane which connects the vertical centerlines of the columns on the periphery of the unit, and within 5 feet (1.5 meters) of an outer surface of a column or footing on the periphery of the unit, must be assumed to be subject to flooding as follows:

(1) When a column is subdivided into watertight compartments by horizontal watertight flats, all compartments in the column within 5 feet (1.5 meters) of the unit’s waterline before damage causing flooding must be assumed to be subject to simultaneous flooding.

(2) When a column is subdivided into watertight compartments by vertical watertight bulkheads, each two adjacent compartments must be assumed subject to simultaneous flooding if the distance between the vertical watertight bulkheads, measured at the column periphery, is equal to or less than one-eighth of the column perimeter at the draft under consideration.

(3) When a column is subdivided into watertight compartments by horizontal watertight flats and vertical watertight bulkheads, those compartments that are within the bounds described in paragraph (a)(2) of this section and within 5 feet (1.5 meters) of the unit’s waterline before damage causing flooding must be assumed to be subject to simultaneous flooding.

(b) Each compartment in a footing must be assumed to be subject to individual flooding when any part of the compartment is within 5 feet (1.5 meters) of the unit’s waterline before damage causing flooding.

§ 174.090Permeability of spaces.

When doing the calculations required in §174.065—

(a) The permeability of a floodable space, other than a machinery space, must be as listed in Table 174.090; and

(b) Calculations in which a machinery space is treated as a floodable space must be based on an assumed machinery space permeability of 85%, unless the use of an assumed permeability of less than 85% is justified in detail.

TABLE 174.090—PERMEABILITY

<table>
<thead>
<tr>
<th>Spaces and tanks</th>
<th>Permeability (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storeroom spaces</td>
<td>60.0</td>
</tr>
<tr>
<td>Accommodation spaces</td>
<td>95.0</td>
</tr>
<tr>
<td>Voids</td>
<td>95.0</td>
</tr>
<tr>
<td>Consumable liquid tanks</td>
<td>95 or 0.1</td>
</tr>
<tr>
<td>Other liquid tanks</td>
<td>95 or 0.2</td>
</tr>
</tbody>
</table>

1 Whichever results in the more disabling condition.
2 If tanks are partially filled, the permeability must be determined from the actual density and amount of liquid carried.

§ 174.100Appliances for watertight and weathertight integrity.

(a) Appliances to insure watertight integrity include watertight doors, hatches, scuttles, bolted manhole covers, or other watertight closures for openings in watertight decks and bulkheads.

(b) Appliances to insure weathertight integrity include weathertight doors and hatches, closures for air pipes, ventilators, ventilation intakes and outlets, and closures for other openings in deckhouses and superstructures.

(c) Each internal opening equipped with appliances to insure watertight integrity that is used intermittently during operation of the unit while afloat must meet the following:

(1) Each door, hatch, and scuttle must—

(1) Be remotely controlled from a normally manned control station, and be operable locally from both sides of the bulkhead; or