listed in §58.30–1(a), must meet the following requirements:

(1) Diagrams of the system providing the information required by §58.30–40(a)(1) through (4) must be submitted. These are not approved but are needed for records and for evaluation of the system in accordance with §58.30–1(a)(14).

(2) The hydraulic fluid used in the system must comply with §58.30–10.

(3) The installed system must be tested in accordance with §58.30–35(c)(2).

(4) All pneumatic cylinders must comply with §58.30–30.

(5) Additional plans may be required for “fail-safe” equipment and for cargo hatch systems with alternate means of operation.

[CGD 73–254, 40 FR 40168, Sept. 2, 1975]

Subpart 58.50—Independent Fuel Tanks

§ 58.50–1 General requirements.

(a) The regulations in this subpart contain requirements for independent fuel tanks.

(b) Passenger vessels exceeding 100 gross tons constructed prior to July 1, 1935, may carry gasoline as fuel not exceeding 40 gallons to supply the emergency electrical system. Passenger vessels exceeding 100 gross tons constructed on or after July 1, 1935, and all emergency systems converted on or after July 1, 1935, shall use fuel which has a flashpoint exceeding 110 °F. (PMCC) for internal combustion engine units. Such vessels shall carry a sufficient quantity of fuel to supply the emergency electrical system. Refer to §112.05–5 of Subchapter J (Electrical Engineering), of this chapter.

(c) An outage of 2 percent shall be provided on all fuel tanks containing petroleum products.


§ 58.50–5 Gasoline fuel tanks.

(a) Construction—(1) Shape. Tanks may be of either cylindrical or rectangular form, except that tanks for emergency electrical systems shall be of cylindrical form.

(2) Materials and construction. The material used and the minimum thickness allowed shall be as indicated in Table 58.50–5(a) except that consideration will be given to other materials which provide equivalent safety as indicated in §58.50–15.

(3) Prohibited types. Tanks with flanged-up top edges that may trap and hold moisture shall not be used.

(4) Openings. Openings for fill, vent and fuel pipes, and openings for fuel level gages where used, shall be on the topmost surface of tanks. Tanks shall have no openings in bottoms, sides, or ends, except that an opening fitted with threaded plug or cap may be used for tank cleaning purposes.

<table>
<thead>
<tr>
<th>Material</th>
<th>Thickness in inches and gage numbers vs. tank capacities for—</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1- through 80-gallon tanks</td>
</tr>
<tr>
<td>Aluminum</td>
<td>0.250 (USSG 3)</td>
</tr>
<tr>
<td>Nickel-copper</td>
<td>0.037 (USSG 20)</td>
</tr>
<tr>
<td>Copper</td>
<td>0.045 (AWG 17)</td>
</tr>
<tr>
<td>Copper-silicon</td>
<td>0.007 (AWG 15)</td>
</tr>
<tr>
<td>Steel or iron</td>
<td>0.0747 (MfgStd 14)</td>
</tr>
</tbody>
</table>

1 Gauges used are U.S. standard “USSG” for aluminum and nickel-copper; “AWG” for copper, copper-nickel and copper-silicon; and “MfgStd” for steel.

2 Tanks over 400 gallons shall be designed with a factor of safety of four on the ultimate strength of the material used with a design head of not less than 4 feet of liquid above the top of the tank.

3 Nickel-copper not less than 0.031 inch (USSG 22) may be used for tanks up to 30-gallon capacity.

4 Fuel tanks constructed of iron or steel, which is less than 5/16-inch thick shall be galvanized inside and outside by the hot dip process.

5 Anodic to most common metals. Avoid dissimilar metal contact with tank body.

6 And other alloys acceptable to the Commandant.
§ 58.50–10 Diesel fuel tanks.

(a) Construction. (1) Tanks may be of either cylindrical or rectangular form.

(2) The materials used and the minimum thickness allowed in the construction of independent fuel tanks shall be as indicated in Table 58.50–10(a), except that consideration will be given to other materials which provide equivalent safety as indicated in § 58.50–15.

(3) Tanks with flanged-up top edges, that may trap and hold moisture, shall not be used.

### Table 58.50–10(a)

<table>
<thead>
<tr>
<th>Material</th>
<th>ASTM specification (all incorporated by reference; see 46 CFR 58.03–1)</th>
<th>Thickness in inches and gage numbers (^1) vs. tank capacities for—</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1- through 80-gallon tanks</td>
</tr>
<tr>
<td>Aluminum (^5)</td>
<td>B 209, Alloy 5086 (^6)</td>
<td>0.250 (USSG 3)</td>
</tr>
<tr>
<td></td>
<td>B 127, Hot rolled sheet or plate</td>
<td>0.037 (USSG 20)</td>
</tr>
</tbody>
</table>

\(^1\) Thickness in inches and numbers refer to the gage numbers as specified in Table 58.50–10(a).

\(^2\) Over 150-gallon tanks are not required to have baffles or baffles may be omitted.

\(^3\) The thickness of the material shall conform to the requirements of Tables 54.50–10(a) and 54.50–17.

\(^4\) Fuel tanks shall be adequately supported and braced to prevent movement. Portable fuel tanks are not permitted.

(5) All fuel tanks shall be electrically bonded to the common ground.

(c) Testing. (1) Prior to installation, tanks vented to atmosphere shall be tested to, and must withstand, a pressure of 5 pounds per square inch or 1\(\frac{1}{2}\) times the maximum head to which they may be subjected in service, whichever is greater. A standpipe of 11\(\frac{1}{4}\) feet in height attached to the tank may be filled with water to accomplish the 5 pounds per square inch test. Permanent deformation of the tank will not be cause for rejection unless accompanied by leakage.

(2) After installation of the fuel tank on a vessel the complete installation shall be tested in the presence of a marine inspector to a head not less than that to which the tank may be subjected in service. Fuel may be used as a testing medium.

(3) All tanks not vented to atmosphere shall be constructed and tested in accordance with part 54 of this subchapter.