§ 58.30–50 Requirements for miscellaneous fluid power and control systems.

(a) All fluid power and control systems installed on a vessel, except those
§ 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.

\[\text{PMCC}\] 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.

(2) The hydraulic fluid used in the system must comply with §58.30–40(a)(1).

(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 40169, 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.

\[\text{PMCC}\] 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.

(2) The hydraulic fluid used in the system must comply with §58.30–40(a)(1).

(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 40169, Sept. 2, 1975]

§ 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>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</td>
<td>0.250 (USG 3)</td>
</tr>
<tr>
<td>Nickel-copper</td>
<td>B 127, Hot rolled sheet or plate</td>
<td>0.037 (USG 20) (^3)</td>
</tr>
<tr>
<td>Copper</td>
<td>B 122, Alloy No. 5</td>
<td>0.045 (AWG 17)</td>
</tr>
<tr>
<td>Copper-silicon</td>
<td>B 96, alloys C65100 and C65200</td>
<td>0.057 (AWG 15)</td>
</tr>
<tr>
<td>Steel or iron (^4)</td>
<td>0.0747 (MfgStd 14)</td>
<td>0.050 (AWG 16)</td>
</tr>
</tbody>
</table>

| Material                  | Thickness in inches and gage numbers \(^1\) vs. tank capacities for— |
|---------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|
|                           | 1- through 80-gallon tanks                                     | More than 80- and not more than 150- gallon tanks | Over 150-gallon tanks \(^2\) |
| Aluminum \(^5\)            | 0.1046 (MfgStd 12)                                               | 0.179 (MfgStd 7).                                   |

\(^1\) Gauges used are U.S. standard “USG” 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 (USG 22) may be used for tanks up to 50-gallon capacity.

\(^4\) Fuel tanks constructed of iron or steel, which is less than 3/16-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.