(iii) Liquid level gages must penetrate at a point that is more than 2 inches from the bottom of the tank.

(5) All tank joints shall be welded.

(6) Nozzles, flanges, or other fittings for pipe connections shall be welded or brazed to the tank. The tank opening in way of pipe connections shall be properly reinforced where necessary. Where liquid level indicating devices are attached to the tank, they shall be of heat resistant materials adequately protected from mechanical damage and provided at the tank connections with devices which will automatically close in the event of rupture of the gage or gage lines.

(7) All tanks exceeding 30 inches in any horizontal dimension shall be fitted with vertical baffle plates where necessary for strength or for control of excessive surge. In general, baffle plates installed at intervals not exceeding 30 inches will be considered as meeting this requirement.

(8) Baffle plates, where required, shall be of the same material and not less than the minimum thickness required in the tank walls and shall be connected to the tank walls by welding or brazing. Limber holes at the bottom and air holes at the top of all baffle plates shall be provided.

(9) Iron or steel tanks shall not be galvanized on the interior. Galvanizing paint or other suitable coating shall be used to protect the outside of iron and steel tanks.

(b) *Installation.* (1) Tanks containing fuel for emergency lighting units shall be located on an open deck or in an adequately ventilated metal compartment. No tank shall be located in a compartment where the temperature may exceed 150 °F.

(2) When cylindrical tanks are installed, longitudinal seams shall be located as near the top of the tank as possible. Fuel tanks shall be located in, or as close as practicable, to the machinery space which is served.

(3) Fuel tanks shall be so installed as to permit examination, testing, or removal for cleaning.

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

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

(c) *Tests.* (1) Prior to installation, tanks vented to the atmosphere shall be tested to and must withstand a pressure of 5 pounds per square inch or 1½ times the maximum head to which they may be subjected in service, whichever is greater. A standpipe of 11½ 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.

[CGFR 68–82, 33 FR 18878, Dec. 18, 1968, as amended by CGFR 69–127, 35 FR 9980, June 17, 1970; CGFR 72–59R, 37 FR 6190, Mar. 25, 1972; USCG–1999–5151, 64 FR 67180, Dec. 1, 1999]

§58.50–15 Alternate material for construction of independent fuel tanks.

(a) Materials other than those specifically listed in Table 58.50–5(a) and in Table 58.50–10(a) may be used for fuel tank construction only if the tank as constructed meets the testing requirements of Marine Department, Underwriters' Laboratories, Inc. (formerly Yacht Safety Bureau) STD E–3, paragraph E3–3. Testing may be accomplished by any acceptable laboratory, such as the Marine Department, Underwriters' Laboratories, Inc. (formerly Yacht Safety Bureau), or may be done by the fabricator if witnessed by a marine inspector.

(b) [Reserved]

[CGFR 68–82, 33 FR 18878, Dec. 18, 1968, as amended by CGFR 69–127, 35 FR 9980, June 17, 1970]