

**§ 178.255-7**

**49 CFR Ch. I (10-1-08 Edition)**

**§ 178.255-7 Protection of valves and accessories.**

(a) All valves, fittings, accessories, safety devices, gauging devices, and the like shall be adequately protected against mechanical damage by a housing closed with a cover plate.

(b) Protective housing shall comply with the requirements under which the tanks are fabricated with respect to design and construction, and shall be designed with a minimum factor of safety of four to withstand loadings in any direction equal to two times the weight of the tank and attachments when filled with water.

**§ 178.255-8 Safety devices.**

- (a) See § 173.315(i) of this subchapter.
- (b) [Reserved]

[Amdt. 178-83, 50 FR 11066, Mar. 19, 1985]

**§ 178.255-9 Compartments.**

(a) When the interior of the tank is divided into compartments, each compartment shall be designed, constructed and tested as a separate tank. Thickness of shell and compartment heads shall be determined on the basis of total tank capacity.

- (b) [Reserved]

**§ 178.255-10 Lining.**

(a) If a lining is required, the material used for lining the tank shall be homogeneous, nonporous, imperforate when applied, not less elastic than the metal of the tank proper. It shall be of substantially uniform thickness, not less than  $\frac{1}{32}$  inch thick if metallic, and not less than  $\frac{1}{16}$  inch thick if non-metallic, and shall be directly bonded or attached by other equally satisfactory means. Rubber lining shall be not less than  $\frac{3}{16}$  inch thick. Joints and seams in the lining shall be made by fusing the material together or by other equally satisfactory means. The interior of the tank shall be free from scale, oxidation, moisture and all foreign matter during the lining operation.

- (b) [Reserved]

**§ 178.255-11 Tank mountings.**

(a) Tanks shall be designed and fabricated with mountings to provide a secure base in transit. "Skids" or similar

devices shall be deemed to comply with this requirement.

(b) All tank mountings such as skids, fastenings, brackets, cradles, lifting lugs, etc., intended to carry loadings shall be permanently secured to tanks in accordance with the requirements under which the tanks are fabricated, and shall be designed with a factor of safety of four, and built to withstand loadings in any direction equal to two times the weight of the tanks and attachments when filled to the maximum permissible loaded weight.

(c) Lifting lugs or side hold-down lugs shall be provided on the tank mountings in a manner suitable for attaching lifting gear and hold-down devices. Lifting lugs and hold-down lugs welded directly to the tank shall be of the pad-eye type. Doubling plates welded to the tank and located at the points of support shall be deemed to comply with this requirement.

(d) All tank mountings shall be so designed as to prevent the concentration of excessive loads on the tank shell.

**§ 178.255-12 Pressure test.**

(a) Each completed portable tank prior to application of lining shall be tested before being put into transportation service by completely filling the tank with water or other liquid having a similar viscosity, the temperature of which shall not exceed 100 °F during the test, and applying a pressure of 60 psig. The tank shall be capable of holding the prescribed pressure for at least 10 minutes without leakage, evidence of impending failure, or failure. All closures shall be in place while the test is made and the pressure shall be gauged at the top of the tank. Safety devices and/or vents shall be plugged during this test.

- (b) [Reserved]

[29 FR 18972, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, as amended by Amdt. 178-104, 59 FR 49135, Sept. 26, 1994]

**§ 178.255-13 Repair of tanks.**

(a) Tanks failing to meet the test may be repaired and retested, provided that repairs are made in complete compliance with the requirements of this specification.

- (b) [Reserved]