

**§ 178.245-5**

**49 CFR Ch. I (10-1-02 Edition)**

**§ 178.245-5 Protection of valves and accessories.**

(a) All valves, fittings, accessories, safety devices, gaging devices, and the like shall be adequately protected against mechanical damage.

(b) The protective device or housing shall conform to the requirements under which the tanks are fabricated with respect to design and construction, and shall be designed to withstand static loadings in any direction equal to twice the weight of the tank and attachments when filled with the lading using a safety factor of not less than four, based on the ultimate strength of the material to be used.

(c) Requirements concerning types of valves, retesting, and qualification of portable tanks contained in §§173.32 and 173.315 of this chapter must be observed.

[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]

**§ 178.245-6 Name plate.**

(a) In addition to the markings required by the Code (see §178.245-1(a)) under which tanks were constructed, they shall have permanently affixed, in close proximity to the ASME "U" stamp certification, a metal plate. This plate shall be permanently affixed by means of soldering, brazing, or welding around its complete perimeter. Neither the plate itself nor the means of attachment to the tank shall be subject to destructive attack by the contents of tank. Upon such plate shall be plainly marked by stamping, embossing, or other means of forming letters into or onto the metal plate itself the following information in characters at least 1/8-inch high:

Manufacturer's name \_\_\_\_\_  
 Serial No. \_\_\_\_\_ Owner's serial No. \_\_\_\_\_  
 D.O.T. Specification No. \_\_\_\_\_  
 Water capacity (pounds) \_\_\_\_\_  
 Tare weight (pounds) \_\_\_\_\_  
 Design pressure (psig) \_\_\_\_\_  
 Design specific gravity \_\_\_\_\_  
 Original test date \_\_\_\_\_  
 Tank retested at \_\_\_\_\_ (psig) on: \_\_\_\_\_

(b) All tank outlets and inlets, except safety relief valves, shall be marked to designate whether they communicate with vapor or liquid when the tank is

filled to the maximum permitted filling density.

[29 FR 18972, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 178-67, 46 FR 49906, Oct. 8, 1981; Amdt. 178-117, 61 FR 50628, Sept. 26, 1996]

**§ 178.245-7 Report.**

(a) A copy of the manufacturer's data report required by the Code (See §178.245-1(a)) under which the tank is fabricated shall be furnished to the owner for each new tank.

(b) [Reserved]

[Amdt. 178-76, 48 FR 28102, June 20, 1983]

**§§ 178.251-178.253-5 [Reserved]**

**§ 178.255 Specification 60; steel portable tanks.**

**§ 178.255-1 General requirements.**

(a) Tanks must be of fusion welded construction, cylindrical in shape with seamless heads concave to the pressure. Tank shells may be of seamless construction.

(b) Tanks must be designed and constructed in accordance with and fulfill all the requirements of the ASME Code.

(c) Tanks including all permanent attachments must be postweld heat treated as a unit.

(d) Requirements concerning types of valves, retesting, and qualification of portable tanks contained in §§173.32 and 173.315 of this chapter must be observed.

[29 FR 18972, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 178-7, 34 FR 18250, Nov. 14, 1969]

**§ 178.255-2 Material.**

(a) Material used in the tank must be steel of good weldable quality and conform with the requirements of the ASME Code.

(b) The minimum thickness of metal, exclusive of lining material, for shell and heads of tanks shall be as follows:

Tank capacity	Minimum thickness (inch)
Not more than 1,200 gallons .....	1/4
Over 1,200 to 1,800 gallons .....	5/16
Over 1,800 gallons .....	3/8

**Research and Special Programs Admin., DOT**

**§ 178.255-10**

[29 FR 18972, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 178-7, 34 FR 18250, Nov. 14, 1969]

**§ 178.255-3 Expansion domes.**

(a) Expansion domes, if applied, must have a minimum capacity of one percent of the combined capacity of the tank and dome.

(b) [Reserved]

**§ 178.255-4 Closures for manholes and domes.**

(a) The manhole cover shall be designed to provide a secure closure of the manhole. All covers, not hinged to the tanks, shall be attached to the outside of the dome by at least 1/8 inch chain or its equivalent. Closures shall be made tight against leakage of vapor and liquid by use of gaskets of suitable material.

(b) [Reserved]

**§ 178.255-5 Bottom discharge outlets.**

(a) Bottom discharge outlets prohibited, except on tanks used for shipments of sludge acid and alkaline corrosive liquids.

(b) If installed, bottom outlets or bottom washout chambers shall be of metal not subject to rapid deterioration by the lading, and each shall be provided with a valve or plug at its upper end and liquid-tight closure at its lower end. Each valve or plug shall be designed to insure against unseating due to stresses or shocks incident to transportation. Bottom outlets shall be adequately protected against handling damage and outlet equipment must not extend to within less than one inch of the bottom bearing surface of the skids or tank mounting.

[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]

**§ 178.255-6 Loading and unloading accessories.**

(a) When installed, gauging, loading and air inlet devices, including their valves, shall be provided with adequate means for their secure closure; and means shall also be provided for the closing of pipe connections of valves.

(b) Interior heater coils, if installed, must be of extra heavy pipe and so constructed that breaking off of exterior

connections will not cause leakage of tanks.

**§ 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 1/32 inch thick if metallic, and not less than 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 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]