§ 179.201–9 Gauging device.

A gauging device of an approved design must be applied to permit determining the liquid level of the lading. The gauging device must be made of materials not subject to rapid deterioration by the lading. When the interior pipe of the gauging device provides a means for passage of the lading from the interior to the exterior of the tank, it must be equipped with an excess flow valve of an approved design. If the opening for passage of lading through the gauging device is not more than 0.060 inch diameter an excess flow valve is not required. The gauging device must be provided with a protective housing.

[Amdt. 179–10, 36 FR 21353, Nov. 6, 1971]

§ 179.201–10 Water capacity marking.

(a) Water capacity of the tank in pounds stamped plainly and permanently in letters and figures at least 3⁄8 inch high into the metal of the tank immediately below the stamped marks specified in §179.200–24(a). This mark shall also be stenciled on the jacket immediately below the dome platform and directly behind or within 3 feet of the right or left side of the ladder, or ladders, if there is a ladder on each side of the tank, in letters and figures at least 1½ inches high as follows:

WATER CAPACITY

000000 Pounds

(b) [Reserved]

§ 179.201–11 Insulation.

(a) Insulation shall be of sufficient thickness so that the thermal conductance at 60 °F. is not more than 0.075 Btu per hour, per square foot, per degree F. temperature differential.

(b) [Reserved]

§ 179.220 General specifications applicable to nonpressure tank car tanks consisting of an inner container supported within an outer shell (class DOT-115).

§ 179.220–1 Tanks built under these specifications must meet the requirements of §§179.220 and 179.221.

§ 179.220–3 Type.

(a) Tanks built under these specifications must consist of an inner container, a support system for the inner container, and an outer shell.

(b) The inner container must be a fusion welded tank of circular cross section with formed heads designed convex outward and must have a manway on top of the tank as prescribed herein. When the inner container is divided into compartments, each compartment must be considered a separate container.

(c) The outer shell must be a fusion welded tank with formed heads designed convex outward.

[Amdt. 179–9, 36 FR 21340, Nov. 6, 1971]

§ 179.220–4 Insulation.

The annular space between the inner container and the outer shell must contain an approved insulation material.

[Amdt. 179–9, 36 FR 21340, Nov. 6, 1971]

§ 179.220–6 Thickness of plates.

(a) The wall thickness, after forming of the inner container shell and 2:1 ellipsoidal heads must be not less than specified in §179.221–1, or not less than that calculated by the following formula:

\[ t = \frac{Pd}{2SE} \]

Where:

\( d \) = Inside diameter in inches;

\( E = 0.9 \) welded joint efficiency; except \( E=1.0 \) for seamless heads;

\( P = \) Minimum required bursting pressure in psig;

\( S = \) Minimum tensile strength of plate material in p.s.i. as prescribed in AAR Specifications for Tank Cars, appendix M, Table M1;
§ 179.220–7

(a) The plate material used to fabricate the inner container and nozzles must meet one of the following specifications and with the indicated minimum tensile strength and elongation in the welded condition.

(b) Carbon steel plate: The maximum allowable carbon content must be 0.31 percent when the individual specification allows carbon content greater than this amount. The plates may be clad with other approved materials.

(c) Aluminum alloy plate: Aluminum alloy plate must be suitable for welding and comply with one of the following specifications (IBR, see § 171.7 of this subchapter):

(d) High alloy steel plate: High alloy steel plate must comply with one of the following specifications (IBR, see § 171.7 of this subchapter):

(e) Manganese-molybdenum steel plate: Manganese-molybdenum steel plate must be suitable for fusion welding and must comply with the following specification (IBR, see § 171.7 of this subchapter):