

§ 179.200-23

49 CFR Ch. I (10-1-13 Edition)

safety relief valves or safety vents, shall be in place when test is made.

(b) Insulated tanks shall be tested before insulation is applied.

(c) Rubber-lined tanks shall be tested before rubber lining is applied.

(d) Caulking of welded joints to stop leaks developed during the foregoing tests is prohibited. Repairs in welded joints shall be made as prescribed in AAR Specifications for Tank Cars, appendix W (IBR, see §171.7 of this subchapter).

[29 FR 18995, Dec. 29, 1964, as amended at 68 FR 75762, Dec. 31, 2003]

§ 179.200-23 Tests of pressure relief valves.

(a) Each valve shall be tested by air or gas for compliance with §179.15 before being put into service.

(b) [Reserved]

[29 FR 18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, as amended at 62 FR 51561, Oct. 1, 1997]

§ 179.200-24 Stamping.

(a) To certify that the tank complies with all specification requirements, each tank shall be plainly and permanently stamped in letters and figures at least 3/8 inch high into the metal near the center of both outside heads as follows:

	Example of required stamping
Specification	DOT-111A
Material	ASTM A 516-GR 70
Cladding material (if any)	ASTM A240-304 Clad
Tank builder's initials	ABC
Date of original test	00-0000
Car assembler (if other than tank builder)	DEF

(b) On Class DOT-111 tank cars, the last numeral of the specification number may be omitted from the stamping; for example, DOT-111A100W.

(c) After July 25, 2012, newly constructed DOT tank cars must have their DOT specification and other required information stamped plainly and permanently on stainless steel identification plates in conformance with the applicable requirements prescribed in §179.24(a). Tank cars built before July 25, 2012, may have the identification plates instead of or in addition to the head stamping.

[29 FR 18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amtd. 179-10, 36 FR 21351, Nov. 6, 1971; Amtd. 179-52, 61 FR 28680, June 5, 1996; 68 FR 48571, Aug. 14, 2003; 77 FR 37985, June 25, 2012]

§ 179.201 Individual specification requirements applicable to non-pressure tank car tanks.

§ 179.201-1 Individual specification requirements.

In addition to §179.200, the individual specification requirements are as follows:

DOT Specification ¹	Insulation	Bursting pressure (psig)	Minimum plate thickness (inches)	Test pressure (psig)	Bottom outlet	Bottom washout	References (179.201 - ***)
111A60ALW1 ...	Optional	240	1/2	60	Optional	Optional	6(a).
111A60ALW2 ...	Optional	240	1/2	60	No	Optional.	Optional.
111A60W1	Optional	240	7/16	60	Optional	Optional	6(a).
111A60W2	Optional	240	7/16	60	No	Optional.	Optional.
111A60W5	Optional	240	7/16	60	No	No	3, 6(b).
111A60W6	Optional	240	7/16	60	Optional	Optional	4, 5, 6(a), 6(c).
111A60W7	Optional	240	7/16	60	No	No	4, 5, 6(a).
111A100ALW1	Optional	500	5/8	100	Optional	Optional	6(a).
111A100ALW2	Optional	500	5/8	100	No	Optional.	Optional.
111A100W1	Optional	500	7/16	100	Optional	Optional	6(a).
111A100W2	Optional	500	7/16	100	No	Optional.	Optional.
111A100W3	Yes	500	7/16	100	Optional	Optional	6(a).
111A100W4	Yes (see 179.201-11).	500	7/16	100	No	No	6(a), 8, 10.
111A100W5	Optional	500	7/16	100	No	No	3.
111A100W6	Optional	500	7/16	100	Optional	Optional	4, 5, 6(a) and 6(c).
111A100W7	Optional	500	7/16	100	No	No	4, 5, 6(c).

¹Tanks marked "ALW" are constructed from aluminum alloy plate; "AN" nickel plate; "CW," "DW," "EW," "W6," and "W7" high alloy steel or manganese-molybdenum steel plate; and those marked "BW" or "W5" must have an interior lining that conforms to § 179.201-3.

[Amdt. 179-52, 61 FR 28680, June 5, 1996, as amended by 66 FR 45390, Aug. 28, 2001; 68 FR 48571, Aug. 14, 2003]

§ 179.201-2 [Reserved]

§ 179.201-3 Lined tanks.

(a) *Rubber-lined tanks.* (1) Each tank or each compartment thereof must be lined with acid-resistant rubber or other approved rubber compound vulcanized or bonded directly to the metal tank, to provide a nonporous laminated lining, at least $\frac{5}{32}$ -inch thick, except overall rivets and seams formed by riveted attachments in the lining must be double thickness. The rubber lining must overlap at least $1\frac{1}{2}$ inches at all edges which must be straight and be beveled to an angle of approximately 45° , or butted edges of lining must be sealed with a 3-inch minimum strip of lining having 45° beveled edges.

(2) As an alternate method, the lining may be joined with a skived butt seam then capped with a separate strip of lining 3 inches wide having 45° beveled edges. An additional rubber reinforcing pad at least $4\frac{1}{2}$ feet square and at least $\frac{1}{2}$ -inch thick must be applied by vulcanizing to the lining on bottom of tank directly under the manway opening. The edges of the rubber pad must be beveled to an angle of approximately 45° . An opening in this pad for sump is permitted. No lining must be under tension when applied except due to conformation over rivet heads. Interior of tank must be free from scale, oxidation, moisture, and all foreign matter during the lining operation.

(3) Other approved lining materials may be used provided the material is resistant to the corrosive or solvent action of the lading in the liquid or gas phase and is suitable for the service temperatures.

(b) Before a tank car tank is lined with rubber, or other rubber compound, a report certifying that the tank and its equipment have been brought into compliance with spec. DOT-111A60W5 or 111A100W5 must be furnished by car owner to the party who is to apply the lining. A copy of this report in approved form, certifying that tank has been lined in compliance with all requirements of one of the above specifications, must be furnished by party

lining tank to car owner. Reports of the latest lining application must be retained by the car owner until the next relining has been accomplished and recorded.

(c) All rivet heads on inside of tank must be buttonhead, or similar shape, and of uniform size. The under surface of heads must be driven tight against the plate. All plates, castings and rivet heads on the inside of the tank must be calked. All projecting edges of plates, castings and rivet heads on the inside of the tank must be rounded and free from fins and other irregular projections. Castings must be free from porosity.

(d) All surfaces of attachments or fittings and their closures exposed to the lading must be covered with at least $\frac{1}{8}$ -inch acid resistant material. Attachments made of metal not affected by the lading need not be covered with rubber or other acid resistant material.

(e) Hard rubber or polyvinyl chloride may be used for pressure retaining parts of safety vents provided the material is resistant to the corrosive or solvent action of the lading in the liquid or gas phase and is suitable for the service temperatures.

(f) Polyvinyl chloride lined tanks. Tank car tanks or each compartment thereof may be lined with elastomeric polyvinyl chloride having a minimum lining thickness of three thirty-seconds inch.

(g) Polyurethane lined tanks. Tank car tanks or each compartment thereof may be lined with elastomeric polyurethane having a minimum lining thickness of one-sixteenth inch.

[Amdt. 179-10, 36 FR 21352, Nov. 6, 1971, as amended at 66 FR 45186, Aug. 28, 2001; 68 FR 48571, Aug. 14, 2003]

§ 179.201-4 Material.

All fittings, tubes, and castings and all projections and their closures, except for protective housing, must also meet the requirements specified in ASTM A 262 (IBR, see § 171.7 of this subchapter), except that when preparing the specimen for testing the carburized