

- (2)-(3) [Reserved]
 (b) [Reserved]

[Amdt. 179-7, 36 FR 14697, Aug. 10, 1971; Amdt. 179-10, 36 FR 21346, Nov. 6, 1971, as amended by Amdt. 179-25, 44 FR 20433, Apr. 5, 1979; Amdt. 179-40, 52 FR 13046, Apr. 20, 1987; Amdt. 179-45, 55 FR 52728, Dec. 21, 1990; Amdt. 179-52, 61 FR 28680, June 5, 1996; 68 FR 75760, Dec. 31, 2003]

§ 179.102-4 Vinyl fluoride, stabilized.

Each tank used to transport vinyl fluoride, stabilized, must comply with the following special requirements:

(a) All plates for the tank must be fabricated of material listed in paragraph (a)(2) of this section, and appurtenances must be fabricated of material listed in paragraph (a)(1) or (a)(2) of this section.

(1) Stainless steel, ASTM A 240/A 240M (IBR, *see* §171.7 of this subchapter), Type 304, 304L, 316 or 316L, in which case impact tests are not required; or

(2) Steel complying with ASTM Specification A 516 (IBR, *see* §171.7 of this subchapter); Grade 70; ASTM Specification A 537 (IBR, *see* §171.7 of this subchapter), Class 1; or AAR Specification TC 128, Grade B, in which case impact tests must be performed as follows:

(i) ASTM A 516/A 516M and A 537/A 537M material must meet the Charpy V-Notch test requirements, in longitudinal direction of rolling, of ASTM A 20/A 20M (IBR, *see* §171.7 of this subchapter).

(ii) AAR Specification TC 128 material must meet the Charpy V-Notch test requirements, in longitudinal direction of rolling, of 15 ft.-lb. minimum average for 3 specimens, with a 10 ft.-lb. minimum for any one specimen, at minus 50 °F or colder, in accordance with ASTM A 370 (IBR, *see* §171.7 of this subchapter).

(iii) Production welded test plates must—

(A) Be prepared in accordance with AAR Specifications for Tank Cars, appendix W, W4.00 (IBR, *see* §171.7 of this subchapter);

(B) Include impact specimens of weld metal and heat affected zone prepared and tested in accordance with AAR Specifications for Tank Cars, appendix W, W9.00; and

(C) Meet the same impact requirements as the plate material.

(b) Insulation must be of approved material.

(c) Excess flow valves must be installed under all liquid and vapor valves, except safety relief valves.

(d) A thermometer well may be installed.

(e) Only an approved gaging device may be installed.

(f) A pressure gage may be installed.

(g) Aluminum, copper, silver, zinc, or an alloy containing any of these metals may not be used in the tank construction, or in fittings in contact with the lading.

(h) The jacket must be stenciled, adjacent to the water capacity stencil,

MINIMUM OPERATING TEMPERATURE ___ °F.

(i) The tank car and insulation must be designed to prevent the vapor pressure of the lading from increasing from the pressure at the maximum allowable filling density to the start-to-discharge pressure of the reclosing pressure relief valve within 30 days, at an ambient temperature of 90 °F.

[Amdt. 179-32, 48 FR 27707, June 16, 1983, as amended at 49 FR 24317, June 12, 1984; 49 FR 42736, Oct. 24, 1984; Amdt. 179-45, 55 FR 52728, Dec. 21, 1990; Amdt. 179-52, 61 FR 28680, June 5, 1996; 65 FR 58632, Sept. 29, 2000; 66 FR 33452, June 21, 2001; 66 FR 45186, 45390, Aug. 28, 2001; 67 FR 51660, Aug. 8, 2002; 68 FR 75758, 75760 Dec. 31, 2003]

§ 179.102-17 Hydrogen chloride, refrigerated liquid.

Each tank car used to transport hydrogen chloride, refrigerated liquid must comply with the following special requirements:

(a) The tank car must comply with Specification DOT-105J600W and be designed for loading at minus 50 °F. or colder.

(b) All plates for the tank must be fabricated of material listed in paragraph (b)(2) of this section, and appurtenances must be fabricated of material listed in paragraph (b)(1) or (b)(2) of this section.

(1) Stainless steel, ASTM A 240/A 240M (IBR, *see* §171.7 of this subchapter), Type 304, 304L, 316, or 316L, in which case impact tests are not required; or

§ 179.103

49 CFR Ch. I (10–1–05 Edition)

(2) Steel conforming to ASTM A 516/A 516M (IBR, see §171.7 of this subchapter), Grade 70; ASTM A 537/A 537M, (IBR, see §171.7 of this subchapter) Class 1; or AAR Specification TC 128, Grade B in which case impact tests must be performed as follows:

(i) ASTM A 516/A 516M and A 537/A 537M material must meet the Charpy V-notch test requirements, in longitudinal direction of rolling, of ASTM A 20/A 20M (IBR, see §171.7 of this subchapter).

(ii) AAR Specification TC 128 material must meet the Charpy V-notch test requirements, in longitudinal direction of rolling of 15 ft.-lb. minimum average for 3 specimens, with a 10 ft.-lb. minimum for any one specimen, at minus 50 °F or colder, in accordance with ASTM A 370 (IBR, see §171.7 of this subchapter).

(iii) Production welded test plates must—

(A) Be prepared in accordance with AAR Specifications for Tank Cars, appendix W, W4.00 (IBR, see §171.7 of this subchapter);

(B) include impact test specimens of weld metal and heat affected zone prepared and tested in accordance with AAR Specifications for Tank Cars, appendix W, W9.00; and

(C) meet the same impact requirements as the plate material.

(c) Insulation must be of approved material.

(d) Pressure relief valves must be trimmed with monel or other approved material and equipped with a rupture disc of silver, polytetrafluoroethylene coated monel, or tantalum. Each pressure relief device shall have the space between the rupture disc and the valve vented with a suitable auxiliary valve. The discharge from each pressure relief valve must be directed outside the protective housing.

(e) Loading and unloading valves must be trimmed with Hastelloy B or C, monel, or other approved material, and identified as “Vapor” or “Liquid”. Excess flow valves must be installed under all liquid and vapor valves, except safety relief valves.

(f) A thermometer well may be installed.

(g) Only an approved gaging device may be installed.

(h) A sump must be installed in the bottom of the tank under the liquid pipes.

(i) All gaskets must be made of, or coated with, polytetrafluoroethylene or other approved material.

(j) The tank car tank may be equipped with exterior cooling coils on top of the tank car shell.

(k) The jacket must be stenciled, adjacent to the water capacity stencil,

MINIMUM OPERATING TEMPERATURE ___ °F.

(l) The tank car and insulation must be designed to prevent the pressure of the lading from increasing from the pressure at the maximum allowable filling density to the start-to-discharge pressure of the pressure relief valve within 30 days, at an ambient temperature of 90° F.

[Amdt. 179–32, 48 FR 27708, June 16, 1983, as amended at 48 FR 50441, Nov. 1, 1983; 49 FR 24317, June 12, 1984; 49 FR 42736, Oct. 24, 1984; Amdt. 179–45, 55 FR 52728, Dec. 21, 1990; 66 FR 45390, Aug. 28, 2001; 67 FR 51660, Aug. 8, 2002; 68 FR 75758, 75760, Dec. 31, 2003]

§ 179.103 Special requirements for class 114A * * * tank car tanks.

(a) In addition to the applicable requirements of §§179.100 and 179.101 the following requirements shall be complied with:

(b) [Reserved]

§ 179.103–1 Type.

(a) Tanks built under this section may be of any approved cross section.

(b) Any portion of the tank shell not circular in cross section shall have walls of such thickness and be so reinforced that the stresses in the walls caused by a given internal pressure are no greater than the circumferential stresses which would exist under the same internal pressure in the wall of a tank of circular cross section designed in accordance with paragraphs §179.100–6 (a) and (b), but in no case shall the wall thickness be less than that specified in §179.101.

(c) [Reserved]

(d) Valves and fittings need not be mounted on the manway cover.