

dished heads must have main inside radius not exceeding 10 feet, and inside knuckle radius must not be less than 3¾ inches for steel, alloy steel, or nickel tanks, and not less than 5 inches for aluminum alloy tanks.

[Amdt. 179-10, 36 FR 21350, Nov. 6, 1971]

**§ 179.200-9 Compartment tanks.**

(a) When a tank is divided into compartments, by inserting interior heads, interior heads must be inserted in accordance with AAR Specifications for Tank Cars, appendix E, E7.00 (IBR, see §171.7 of this subchapter), and must comply with the requirements specified in §179.201-1. Voids between compartment heads must be provided with at least one tapped drain hole at their lowest point, and a tapped hole at the top of the tank. The top hole must be closed, and the bottom hole may be closed, with not less than three-fourths inch and not more than 1½-inch solid pipe plugs having NPT threads.

(b) When the tank is divided into compartments by constructing each compartment as a separate tank, these tanks shall be joined together by a cylinder made of plate, having a thickness not less than that required for the tank shell and applied to the outside surface of tank head flanges. The cylinder shall fit the straight flange portion of the compartment tank head tightly. The cylinder shall contact the head flange for a distance of at least two times the plate thickness, or a minimum of 1 inch, whichever is greater. The cylinder shall be joined to the head flange by a full fillet weld. Distance from head seam to cylinder shall not be less than 1½ inches or three times the plate thickness, whichever is greater. Voids created by the space between heads of tanks joined together to form a compartment tank shall be provided with a tapped drain hole at their lowest point and a tapped hole at top of tank. The top hole shall be closed and the bottom hole may be closed with solid pipe plugs not less than ¾ inch nor more than 1½ inches having NPT threads.

[29 FR 18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 179-10, 36 FR 21350, Nov. 6, 1971; 66 FR 45186, Aug. 28, 2001; 68 FR 75761, Dec. 31, 2003]

**§ 179.200-10 Welding.**

(a) All joints shall be fusion-welded in compliance with the requirements of AAR Specifications for Tank Cars, appendix W (IBR, see §171.7 of this subchapter). Welding procedures, welders and fabricators shall be approved.

(b) Welding is not permitted on or to ductile iron or malleable iron fittings.

[29 FR 18995, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 179-10, 36 FR 21350, Nov. 6, 1971; 68 FR 75761, Dec. 31, 2003]

**§ 179.200-11 Postweld heat treatment.**

When specified in §179.201-1, after welding is complete, postweld heat treatment must be in compliance with the requirements of AAR Specifications for Tank Cars, appendix W (IBR, see §171.7 of this subchapter).

[68 FR 75761, Dec. 31, 2003]

**§ 179.200-13 Manway ring or flange, pressure relief device flange, bottom outlet nozzle flange, bottom washout nozzle flange and other attachments and openings.**

(a) These attachments shall be fusion welded to the tank and reinforced in an approved manner in compliance with the requirements of appendix E, figure 10, of the AAR Specifications for Tank Cars (IBR, see §171.7 of this subchapter).

(b) The opening in the manway ring must be at least 16 inches in diameter except that acid resistant lined manways must be at least 18 inches in diameter before lining.

(c) The manway ring or flange, shall be made of cast, forged or fabricated metal. The metal of the dome, tank, or nozzle must be compatible with the manway ring or flange, so that they may be welded together.

(d) The openings for the manway or other fittings shall be reinforced in an approved manner.

[Amdt. 179-40, 52 FR 13047, Apr. 20, 1987, as amended at 68 FR 75761, Dec. 31, 2003]

**§ 179.200-14 Expansion capacity.**

(a) Tanks shall have expansion capacity as prescribed in this subchapter. This capacity shall be provided in the tank for Class DOT-111A cars, or in a