§ 179.400–10  Sump or siphon bowl.

A sump or siphon bowl may be in the bottom of the inner tank shell if—
(a) It is formed directly into the inner tank shell, or is formed and welded to the inner tank shell and is of weldable quality metal that is compatible with the inner tank shell;
(b) The stress in any orientation under any condition does not exceed the circumferential stress in the inner tank shell; and
(c) The wall thickness is not less than that specified in §179.401–1.

§ 179.400–11  Welding.

(a) Except for closure of openings and a maximum of two circumferential closing joints in the cylindrical portion of the outer jacket, each joint of an inner tank and the outer jacket must be a fusion double welded butt joint.
(b) The closure for openings and the circumferential closing joints in the cylindrical portion of the outer jacket, including head to shell joints, may be a single welded butt joint using a backing strip on the inside of the joint.
(c) Each joint must be welded in accordance with the requirements of AAR Specifications for Tank Cars, appendix W (IBR, see §171.7 of this subchapter).
(d) Each welding procedure, welder, and fabricator must be approved.


§ 179.400–12 Postweld heat treatment.

(a) Postweld heat treatment of the inner tank is not required.
(b) The cylindrical portion of the outer jacket, with the exception of the circumferential closing seams, must be postweld heat treated as prescribed in AAR Specifications for Tank Cars, appendix W (IBR, see §171.7 of this subchapter). Any item to be welded to this portion of the outer jacket must be attached before postweld heat treatment. Welds securing the following need not be postweld heat treated when it is not practical due to final assembly procedures:
(1) the inner tank support system to the outer jacket,
(2) connections at piping penetrations,
(3) closures for access openings, and
(4) circumferential closing joints of head to shell joints.
(c) When cold formed heads are used on the outer jacket they must be heat treated before welding to the jacket shell if postweld heat treatment is not practical due to assembly procedures.


§ 179.400–13 Support system for inner tank.

(a) The inner tank must be supported within the outer jacket by a support system of approved design. The system and its areas of attachment to the outer jacket must have adequate strength and ductility at operating