

Agenda Item: 650-2056

Title: **Plates welded to Bottoms**

Date: Unknown

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Purpose: Clarify placement of striker pads on new bottoms

Source: John Farrell

Revision: 1

Impact: This will serve to provide guidance for locating striker and other reinforcement pads on new tank bottoms

Rationale: Section 5.1.5.4 provides minimum weld spacing for the lap welded seams in bottom plates. Figure 5-26 provides some acceptable column base details and shows that there is a wear plate that is seal welded to the bottom plate. There are times in which other pads such as for pipe supports are welded to the bottom plate.

Proposal: Provide guidance on adding striker plates, wear pads and other bottom reinforcements

5.1.5.4 Lap-Welded Bottom Joints

- 5.1.5.4.1 Lap-welded bottom plates shall be reasonably rectangular. Additionally, plate may be either square cut or may have mill edges. Mill edges to be welded shall be relatively smooth and uniform, free of deleterious deposits, and have a shape such that a full fillet weld can be achieved. Unless otherwise specified by the Purchaser, lap welded plates on sloped bottoms shall be overlapped in a manner to reduce the tendency for liquid to puddle during draw- down.

5.1.5.4.2 Three-plate laps in tank bottoms shall be at least 300 mm (12 in.) from each other, from the tank shell, and from joints between annular plates and the bottom. A three-plate lap is created where three plates come together and all plates are joined to one another by lap welds. A location where two bottom plates are lap-welded to each other and are lapped onto or under an annular plate constitutes a three-plate lap, but lapping a single bottom plate onto or under a butt-welded annular plate splice does not constitute a three-plate lap weld since the two annular plates are not joined together by a lap weld. Lap joint connections to butt-welded annular plates are illustrated in Figure 5.3d.

5.1.5.4.3 Striker plates, wear pads and other bottom reinforcements shall conform to the following:

- a. The plate must be no smaller than 150mm (6 in.) across in any direction
- b. The minimum angle of the reinforcement plate, intersecting a bottom plate weld seam is 45 degrees
- c. The toe of any weld shall not be closer than 2" to the toe of a bottom plate weld seam