

Agenda Item: 650-2063

Title: Annex S nozzle weld spacing

Date: May 18, 2021

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Purpose: To allow nozzle spacings less than specified in 5.7.3 on small stainless steel tanks

Source: Jimmy Schroeder

Revision: 2

Impact: Allow fittings closer to bottoms of tanks on smaller stainless steel tanks.

Rationale: Annex A and Annex J tanks are allowed to have nozzle spacing less than specified in 5.7.3 since they are smaller, have lower stresses, and lower joint efficiencies. Annex S allows for tank designs using 70% and 85% joint efficiencies. However, the nozzle spacing requirements are as specified in 5.7.3. Smaller stainless steel tanks should be allowed to have similar spacings under similar conditions.

Based on a negative and positive comments the Item is being re-balloted with the changes shown in purple. Rev. 1 changes are shown in red. The substantive change is changing the minimum distance for A, B, or E from 2 ½ times the shell thickness to 2" and for nozzle C from 1 ½" to 2"

Proposal: Proposed wording:

S.3.3.6 For tanks in which the shell plate has a nominal thickness of no more than 13 mm (1/2 in.) with a maximum 13 mm (1/2 in.) shell thickness and a joint efficiency not exceeding 85%, the requirements of 5.7.3 for the spacing of welds do not apply except for the requirement that the spacing between the toes of the welds around a connection as shown in Figure 5.6 for A, B, C or E shall not be less than 2". 2 ½ times the shell thickness at the connection (i.e. for dimensions A, B, C, or E in Figure 5.6 shall not be less than 2 ½ times the shell thickness), and shall not be less than 1 ½" for C.