Title: Shell Opening Reinforcement
Date: February 11, 2008
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Purpose: To clarify the existing wording of the standard.
Source: Email from B. Mistry 04/02/07
Revision: Rev 0
Impact: Minimal

Background: The Email requested that API address the following questions:

1. Is purchaser approval required if nozzles are reinforced per API-620 including all attachment welds, which may not comply with 3.7.2.8 and Fig.3.4A and 3-5 and associated tables?

2. Is full fillet weld on outside of reinforcing pad required even if you prove by strength analysis following API-620 and ASME Sect. VIII Div.1 that full fillet is not required? (see 3.7.2.7)

Proposal: For increased clarity of this section and to answer the email questions, it is proposed to modify section 5.7.1.8 as shown below.

<table>
<thead>
<tr>
<th>Existing Standard</th>
<th>Proposed Change</th>
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</thead>
<tbody>
<tr>
<td>5.7.1.8 With the approval of the Purchaser, the shape and dimensions of the shell reinforcing plates, illustrated in Figures 5-7A, 5-7B, and 5-8 and dimensioned in the related tables, may be altered as long as the thickness, length, and width dimensions of the proposed shapes meet the area, welding, and spacing requirements outlined in 5.7.2 and 5.7.3. <strong>Reinforcement and welding of shell openings that comply with API Std 620 are acceptable alternatives.</strong> This statement of permissible alternatives of shell opening reinforcement does not apply to flush-type cleanout fittings and flush-type shell connections.</td>
<td>5.7.1.8 With the approval of the Purchaser, the shape and dimensions of the shell reinforcing plates, illustrated in Figures 5-7A, 5-7B, and 5-8 and dimensioned in the related tables, may be altered as long as the thickness, length, and width dimensions of the proposed shapes meet the area, welding, and spacing requirements outlined in either 5.7.2 and 5.7.3 or API Std 620. <strong>This statement of permissible alternatives of shell opening reinforcement does not apply to flush-type cleanout fittings and flush-type shell connections.</strong></td>
</tr>
</tbody>
</table>

Rationale: It is felt that the revised wording clarifies the text and answers the Emailed questions as follows:

1. Purchaser approval is required when deviating from API 650 figures
2. Deviation from the API figures is acceptable if the new reinforcement meets either API 650 or API 620 area, welding and spacing requirements.

Notes: None

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