

Agenda Item: 653-2053

Title: Extent of Radiography in Shell Inserts and Door Sheets

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Purpose: Clarification of API 653 12.1.3.2 to emphasize “weld repairs” are repairs of existing defective welds.

API 653 12.2.1.6 as written is confusing. Clarify the extent of radiography at weld repairs in shell inserts and door sheet installations.

Source: Agenda Item based on SCAST Fab Inquiry 653-2021-F2

Revision: 1

Impact: The business impact of this item is neutral.

Rationale: The title, **12.1.3 Examination of Repaired Weld Defects**, is indicative that paragraph 12.1.3.2 is about repair of existing welds. Utilize existing API requirements and language to clarify 12.2.1.6.

Proposal: **Original Wording**

12.1.3.2 Completed weld repairs of butt welds shall be examined over their full length by radiographic or ultrasonic methods. However, for completed repairs to butt welds found in shell plate to shell plate joints, the additional radiographs, as required in 12.2.1.1.c), 12.2.1.2.c), and 12.2.1.3.c), do not apply.

Proposed Wording

12.1.3.2 Completed weld repairs of ~~defective in existing shell~~ butt welds shall be examined over ~~their~~ the full length of the repair by radiographic or ultrasonic methods. However, ~~for completed repairs to butt welds found in shell plate to shell plate joints,~~ the additional radiographs, as required in 12.2.1.1.c), 12.2.1.2.c), and 12.2.1.3.c), do not apply.

Original Wording

12.2.1.6 New and replaced shell plate and door sheet welds shall be radiographed. All junctions between repair and existing welds shall be radiographed. If defects are found, 100 % radiography shall be performed on the repaired weld.

Proposed Wording

12.2.1.6 For new ~~and~~ replaced shell plates, ~~and~~ door sheets, and repairs made to existing vertical and horizontal seams:

a. New and replaced welds shall be radiographed per 12.2.1. If defects are found, the areas shall be repaired and radiographed per API-650 8.1.6 & 8.1.7,

b. All junctions between ~~repair~~ new or replaced and existing welds shall be radiographed and any rejectable areas found in existing welds shall be dispositioned per 12.2.2. ~~If defects are found, 100 % radiography shall be performed on the repaired weld. If~~

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~~unacceptable defects are found in new welds, the extent of unacceptable welding shall be determined as described in API 650 8.1.6 and repaired. Defects in existing welds shall be evaluated in accordance with 12.2.2 of this Standard.~~

Notes: