



U.S. NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

NRC feedback on NDE-related Code Actions

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NRC/RES/DE

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Code Case N-695-1, Qualification Requirements for Dissimilar Metal Piping Welds, Section XI, Division 1
Code Case N-696-1, Qualification Requirements for Appendix VIII Piping Examinations Conducted from the Inside Surface, Section XI, Division 1

- NRC plans to vote “Yes” to the two proposed Code Cases provided that the additional information requested at the WG Volumetrics meeting in Atlanta satisfies NRC concerns
- NRC has one underlying condition –
 - No flaw greater than 50% through wall will be left in service without NRC approval
 - NRC is in process of identifying the appropriate place for this condition



Nonmandatory Appendix D, Conditioning of Welds that Require Ultrasonic Examination

- Counterbore length
 - In previous version, the length of the counterbore was required to be 2T minimum from the root of the weld.
 - No requirement exists in this latest version.
 - Suggest changing D-1100(a) to include words such as “counterbore should extend outside of examination volume”



Nonmandatory Appendix D, Conditioning of Welds that Require Ultrasonic Examination

- D-1300(b): “The ultrasonic examination surface finish shall be 250 microinches (6.3 micrometers) RMS or better for a length of at least two times the nominal wall plus 4 in. (100 mm) from the edge of the weld crown on at least one side of the weld where the examination is required.
- NRC feedback:
 - Replace the word “length” with “distance”
 - Paragraph must provide guidance for marking the edges of welds
 - Rather than requiring the surface to be finished “on at least one side of the weld” the paragraph should state “on all surfaces from which exams will be conducted”



CC N-831, Ultrasonic Examination in Lieu of Radiography for Welds in Ferritic Pipe

- NRC plans to vote “No” to the proposed Code Case N-831
- Code Case not supported well enough in technical basis document
- NRC still has many issues with the Case as written, including, but not limited to:
 - Many requirements pulled directly out of Appendix VIII. However, Appendix VIII written to address detection of surface breaking cracks. Fabrication flaws very different. Need to address why/how Appendix VIII requirements are applicable to fabrication exams.
 - NRC/PNNL research shows that single-side access should not be allowed
 - PAUT should be required not optional
 - The demonstration specimens should be fabricated using welding procedures that have the same process with similar parameters