

Date Distributed:



**THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS**

NATIONAL BOARD INSPECTION CODE SUBGROUP REPAIRS & ALTERATIONS

AGENDA

Meeting of July 14, 2026
Salt Lake City, UT

The National Board of Boiler & Pressure
Vessel Inspectors 1055 Crupper Avenue
Columbus, Ohio 43229-1183
Phone: (614)888-8320
FAX: (614)847-1828

1. Call to Order

The meeting will be called to order at 8:00 a.m. Mountain Time and will be held in Ballroom C on the first floor of the hotel.

2. Roll call of Members and Introduction of Visitors

3. Check for a Quorum

4. Announcements

- This meeting marks the end of Cycle D for the 2027 NBIC edition.
- The National Board will be hosting a reception on Wednesday evening from 5:30 p.m. to 7:30 p.m. at The Lucky H Restaurant on the first floor of the hotel.
- The National Board will be hosting breakfast and lunch on Thursday for those attending the Main Committee meeting. Breakfast will be served from 7:00 a.m. to 8:00 a.m. in the Wyoming room on the first floor of the hotel, and lunch will be served at the same location from 11:30 a.m. to 12:30 p.m.
- Meeting schedules, meeting room layouts, and other helpful information can be found on the National Board website under the **NBIC** tab → NBIC Meeting Information.
- Remember to add any attachments that you'd like to show during the meeting (proposals, reference documents, powerpoints, etc.) to the NBIC SharePoint site (nationalboard.sharepoint.com/sites/NBIC) **prior to the meeting.**
 - Note that access to the NBIC SharePoint site is limited to committee members only.
 - ALL powerpoint attachments/presentations must be sent to the NBIC Secretary for approval prior to the meeting.
 - Contact Jonathan Ellis (nbicsecretary@nbbi.org) for any questions regarding NBIC SharePoint access.
- When possible, please submit proposals in Word format showing "strike through/underline." Project Managers: please ensure any proposals containing text from previous NBIC editions are updated with text from the most current edition.
- If you'd like to request a new Interpretation or Action item, do so on the National Board Business Center.
 - Anyone, member or not, can request a new item.
- As a reminder, anyone who would like to become a member of a group or committee:
 - Should attend at least two meetings prior to being put on the agenda for membership consideration. The nominee will be on the agenda for voting during their third meeting.
 - The nominee must submit the formal request along with their resume to the NBIC Secretary **PRIOR TO** the meeting. nbicsecretary@nbbi.org
 - If needed, we can also create a ballot for voting on a new member between meetings.
- Thank you to everyone who registered online for this meeting. Online registration is very helpful for planning our reception, meals, room setup, etc. It is also a good way to make sure we have the most up-to-date contact information. Please continue to use the online registration for each meeting.

5. Awards and Special Recognitions

Mr. Steve Frazier – 5 years as a member of Subgroup R&A

6. Adoption of the Agenda

7. Approval of the Minutes of the January 2026 Meeting

Members can review the January 2026 meeting minutes on the National Board website:

<https://www.nationalboard.org/Index.aspx?pageID=13&ID=18>.

8. Review of Rosters

a. Membership Nominations

b. Membership Reappointments

The following Subgroup memberships are up for reappointment: Mr. Bob Underwood, Mr. Jon Ferreira, Mr. Tim McBee, and Mr. Trevor Seime. Mr. Andrew Triplett will not be pursuing reappointment.

c. Officer Nominations

Mr. Underwood's term as Chair is set to end on August 22nd, 2026.

d. Resignations

9. NR TG Update

10. Action Items

Item Number: A23-21	NBIC Location: Part 3, 3.3.4.9
General Description: Boiler tube plug guidelines and inclusion or watertube boilers	
Subgroup: Repairs and Alterations	
Task Group: S. Lombardo (PM), P. Gilston, A. Triplett, T. White, J. Ferriera, L. Dutra	
Explanation of Need: Currently both firetube and watertube boilers require a boiler tube be plugged when replacement of a tube is not practicable at the time the defective tube is detected.	
SG R&A Jan. 2026 Meeting Action: P. Gilston presented a PR . L. Dutra added to the TG	

Item Number: A23-35	NBIC Location: All Parts, 9.1
General Description: Definition of "non-load bearing attachment" (All Parts)	
Subgroup: Repairs and Alterations	
Task Group: T. White (PM), A. Khssassi, J. Walker, P. Lentzer	
Explanation of Need: The term "nonload bearing attachment" is used as a basis for determining a routine repair but is not defined in the NBIC.	
SG R&A Jan. 2026 Meeting Action: A. Khssassi presented a proposal with changes to 3.3.2 e) 2) to add a description of "non-load bearing attachments". Sect. VIII Div. 2 defines this term already and P. Shanks asked if this definition can be used. A. Khssassi revised the proposal (Rev 5) and after much discussion and revisions, the item was Approved with 2 negs (J. Siefert, B. Schafer)	

Item Number: A23-61	NBIC Location: Part 3, S9.3
General Description: Revise NBIC R-2 Report and guide Subgroup: Repairs and Alterations Task Group: B. Schaefer (PM), T. LeBeau, S. Marks Explanation of Need: Updates to the R-2 Report and the guide for completing R Report. SG R&A Jan. 2026 Meeting Action: B. Schaefer presented a PR. Additional changes to the R Form and Guide are being made and will be presented later.	

Item Number: A24-18	NBIC Location: Part 3, 9.1
General Description: Definition of Controlled Fill Subgroup: Repairs and Alterations Task Group: P. Gilston (PM), A. Triplett, R. Collins, F. Johnson Explanation of Need: Interpretation item I 23-79 addresses the use of the term ‘controlled fill’ in relation to welding method 6. The term is used in 2.5.3 d in relation to welding method 6 and more specifically in Supplement 8. Supplement 8 gives a lot of detail in schematics about a controlled fill in terms of weld bead placement, its use in controlling heat input etc., but in Welding Method 6 the term is not specifically used, but direction for welding is given, typically preheats are specified, electrode size for SMAW, and the use of stringer beads only. SG R&A Jan. 2026 Meeting Action: P. Gilston presented a proposal that was UA by the SG. This will go to All SG’s via LB. (Parts 1, 2, 4)	

Item Number: A24-21	NBIC Location: Part 3, 9.1
General Description: Engineered Repairs and Alterations - Section 1 Scope and Manual reqs Subgroup: Repairs and Alterations Task Group: M. Schaser (PM), B. Ray, R. Underwood, B. Boseo, D. Marek, J. Siefert, P. Becker Explanation of Need: The scope of "Engineered Repairs and Alterations" (A21-45) needs to be clarified in 1.4.1 d) and reflected in the scope statement requirements for manuals in 1.5.1 a). SG R&A Jan. 2026 Meeting Action: M. Schaser presented a proposal that was discussed regarding defining “Advanced Repairs” vs “Basic Repairs”. After lengthy discussion on S11 and how current Cert. Holders would receive this change, the proposal was ultimately voted on. The proposal was Approved with 2 Negs (T. Seime and L. Dutra).	

Item Number: A24-96 NBIC Location: Part 3, 5.5 a)
General Description: Add examples of repairs and alterations specific to Electrochemical Stacks Subgroup: Repairs and Alterations Task Group: A. Triplett (PM), R. Collins, R. Milette Explanation of Need: With inclusion and initial deployments of electrochemical stacks as U Stamped pressure vessels under ASME BPVC Section VIII Division 1 and Code Case 3078, these stacks are starting to be shipped and registered with the National Board. Some basic examples of allowed repairs are needed to help guide an understanding of limitations for electrochemical stacks. SG R&A Jan. 2026 Meeting Action: A. Triplett presented a proposal that was revised and UA.

Item Number: A25-18 NBIC Location: Part 3, 5.7.5
General Description: Requirements for Stamping and Nameplates Subgroup: Repairs and Alterations Task Group: B. McGuire (PM), L. Baker Explanation of Need: which contains critical identification information. However, HRSG boilers differ in that they have multiple master nameplates for different sections (e.g., HP, LP, economizer), all located on the outer casing of the boiler. Currently, NBIC repair nameplates do not provide a way to indicate which specific section was repaired. This limitation creates confusion for future inspections and maintenance, as there is no clear indication of which section underwent repairs. Adding a requirement for repair nameplates to include the specific HRSG boiler section being repaired will enhance clarity and traceability. SG R&A Jan. 2026 Meeting Action: B. McGuire presented a PR

Item Number: A25-20 NBIC Location: Part 3, 3.3.4.6
General Description: Adoption of reinforcement/fillet welded patches from PCC-2 Subgroup: Repairs and Alterations Task Group: M. Schaser (PM), B. Boseo, D. Marek, B. Ray, P. Becker, G. Galanes Explanation of Need: Oil refineries are scant on shutdown opportunities and vital to the fuel needs of the community. At times inspection departments will detect corrosion on an in-service piece of equipment and be unable to clean it up for internal entry without a planned outage. Fillet welded patches are a safer alternative to external weld metal build up, or fitness for service. SG R&A Jan. 2026 Meeting Action: M. Schaser presented a PR. Discussion on adding “external” to the ‘welded lap patch’ term to clarify these are lap patches holding pressure via a fillet weld was had. “Encapsulation” was referenced as a type of “lap patch” and that OUIO’s use this PCC-2 type of activity regularly. This will be LB to the SG.
Item Number: A25-43 NBIC Location: Part 3, New Supplement
General Description: General Requirements for Mechanical Repairs Subgroup: Repairs and Alterations Task Group: T. McBee (PM), K. Moore, S. Frazier, G. Galanes, R. Troutt, J. Hayes, S. Marks Explanation of Need: A new supplement is needed to provide guidance for firms who would like to engage in mechanical repairs utilizing their R Certificate. SG R&A January 2026 Meeting Action: T. McBee asked for TG members. The following were added to the TG: K. Moore, S. Frazier, G. Galanes, R. Troutt, J. Hayes, J. Ferriera, S. Marks NOTE: This item has been put on hold pending review by the National Board’s Board of Trustees.

Item Number: A25-50 NBIC Location: Part 3, S11.3.1
General Description: Expand the scope of Encapsulation Subgroup: Repairs and Alterations Task Group: B. Boseo (PM), P. Gilston, K. Derrick, M. Schaser Explanation of Need: Now that Supplement 11 has been approved, the scope of Encapsulation can now be expanded. SG R&A January 2026 Meeting Action: B. Boseo presented a proposal that was revised based on the SG LB comments. The proposal was discussed regarding the rationale for exempting fire-tube boilers specifically from encapsulation. This was a PR. Phil Gilston was added to the TG as he is on the 2/3 TG. Kiwi Derrick and Matt Schaser were also added.
Item Number: A25-59 NBIC Location: Part 3, S11.1
General Description: Supplement 11 Scope Updates Subgroup: Repairs and Alterations Task Group: M. Schaser (PM), B. Boseo Explanation of Need: Updating the scope of Supplement 11 to include additional guidance and limitations as well as updating the subsection and paragraphs to remove “Engineering” and replace with “Advanced”. SG R&A January 2026 Meeting Action: M. Schaser presented a proposal with new S11 scope verbiage. The proposal was discussed and additional work is needed. This was a PR.
Item Number: A25-60 NBIC Location: Part 3, 3.4.1
General Description: Pressure Test Exemption per Part 3 Paragraph 3.4.1 d) Subgroup: Repairs and Alterations Task Group: M. Schaser (PM), H. Fee, M. Vogt, K. Derrick Explanation of Need: Update wording in Part 3, paragraph 3.4.1.d to be consistent and more robust. SG R&A January 2026 Meeting Action: M. Schaser presented a proposed change with the additional verbiage. The proposal was UA as revised.

Item Number: A25-84 NBIC Location: Part 3, 2.5.3
General Description: Edits to NBIC Part 3, 2.5.3 Subgroup: Repairs and Alterations Task Group: J. Siefert Explanation of Need: Siefert to present this <i>general discussion item</i> at the SG meeting for discussion on next action(s) SG R&A January 2026 Meeting Action: J. Siefert presented a proposal that will go to SG and then SC R&A via LB.

New Action Items:

Item Number: A26-01 NBIC Location: Part 3, S11.2.2
General Description: S11.2.2 Repair of PRIs Without Complete Removal of Defect Subgroup: Repairs and Alterations Task Group: M. Schaser (PM), T. LeBeau, R. Collins, K. Derrick, J. Hayes Explanation of Need: Update paragraph S11.2.2 to be consistent with standard terminology and methodology associated with Fitness-for-Service (FFS). SG R&A July 2026 Meeting Action:

Item Number: A26-03 NBIC Location: Part 3, 3.3.3 j) 1)
General Description: Reviewing/revising Part 3, 3.3.3 j) 1) for clarity Subgroup: Repairs and Alterations Task Group: R. Collins (PM), A. Thompson Explanation of Need: It is unclear if the phrase "including orientation" refers to the nozzle's location on the vessel or if it refers to the direction the nozzle faces. Or if it refers to something else entirely. SG R&A July 2026 Meeting Action:

Item Number: A26-06 NBIC Location: Part 3, S12.1
General Description: Additive weld metal - nickel alloys and GR 91 for time-dependent service Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: We now have supporting information to move forward with “additive weld metal” (DED-wire) in time-dependent service for select alloys. I updated the approved proposal (23-09) to allow nickel alloys and grade 91 to be used in time-dependent service. All that was required was a change to the scope. No changes in the rules were required. SG R&A July 2026 Meeting Action:
Item Number: A26-07 NBIC Location: Part 3, 2.5.3.3 and 2.5.3.4
General Description: Alternative Weld Methods for P3 to P4. Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: An acceptable method is needed to qualify and apply a temper-bead welding procedure, in accordance with ASME Section IX and NBIC Part 3, for a P-No. 3 to P-No. 4 tube-to-header repair on an ASME Section I boiler when post weld heat treatment (PWHT) is impractical. SG R&A July 2026 Meeting Action:
Item Number: A26-14 NBIC Location: Part 3, 9.1
General Description: Owner-User Inspector - Definition Revision Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: There is no such thing as an "Owner-User Commission". SG R&A July 2026 Meeting Action:

Item Number: A26-16 NBIC Location: Part 3, 2.2.1 and 2.2.3
General Description: Box Header welding procedure and personnel qualification relief Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: In the repair environment the corner joints in a box header are no different than any other full penetration weld. the ASME joint design requirements and by extension the special qualification requirements should be waived as they are not adding value when the joints are repaired by welders that have been qualified without backing for the materials and position required for the repair. SG R&A July 2026 Meeting Action:

Item Number: A26-17 NBIC Location: Part 3, 2.5.3.6 c) and 2.5.3.6 c) 5) e)
General Description: Add missing verbiage to Welding Method 6 for filler metals Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: Welding Method 6 - 2.5.3.6 c)5)d) & e) are missing text that describe when to use the prescribed filler metals. This revision is to limit martensitic fillers for the joining of ASME P-No. 15E, Group 1 to P-No. 5A; and to limit austenitic fillers to ASME P-No. 15E, Group 1 to P-No. 8, P-No. 42, P-No. 43 or P-No. 45. This mirrors Welding Method 7, 2.5.3.7 i)4) & 5). SG R&A July 2026 Meeting Action:

Item Number: A26-18 NBIC Location: 3.3.2 e)
General Description: Additional routine repair category for dimple jacket weld repairs by OEM Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: The fifth paragraph of the forward to all parts of NB23 talks to rules that "reasonably certain protection of life and property, so as to give a reasonably long, safe period of usefulness" with that in mind repairs to dimple jacket welds are very low risk from sudden discharges of pressure and tend to leak before braking- when conducting inspections of these repairs the actions of repair inspector are quite administrative and do not seem to be fundamentally essential to goals on the NB23 publication. SG R&A July 2026 Meeting Action:

Item Number: A26-28 NBIC Location: 1.5.1 q) 4)
General Description: QMS timeframe for the return of the "R" Symbol stamp Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: This would propose a specific timeframe, (30days, 90 days, 1 year, etc.) for the return of the "R" Stamp. SG R&A July 2026 Meeting Action:

Item Number: A26-31 NBIC Location: Part 3, Supplement 8
General Description: Supplement 8 revision to include fillet welds Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: Repairs and replacements to Boiler External Piping systems frequently involve P No. 15E (Grade 91) small bore piping components. Performing Postweld Heat Treatment (PWHT) on these components presents significant challenges, particularly where localized PWHT may expose sensitive components, such as valve internals, to elevated temperatures that could result in premature degradation or failure. Additional complications may arise due to abrupt changes in material thickness, such as those associated with socket welded fittings, where fillet welds are commonly used. NBIC Part 3, Supplement 8 provides alternative technical guidance for weld repair and post repair inspection of certain creep strength enhanced ferritic steel (CSEF) pressure retaining items. It is requested of the committee to entertain addressing repair of small diameter fillet welds using supplement 8 provisions. This will provide greater uniform clarity in industry on repair of these items. SG R&A July 2026 Meeting Action:
Item Number: A26-32 NBIC Location: Part 3, 3.3.3 and 3.4.4
General Description: Deletion of repair / alterations examples Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: The lists of repair and alteration examples frequently causes confusion to code users and at times is misleading as to the intent of the committee. Interpretation 25 clearly establishes that the examples are just that not the definitions. with the recent addition of supplement 10 and the existing and long-standing definitions of Alteration and Repair in the glossary the examples or repairs / alteration serves no use. SG R&A July 2026 Meeting Action:

Item Number: A26-33 NBIC Location: Part 3, 9.1
General Description: Define "Required Thickness" Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: Current U-1A data reports list nominal thickness, which reflects procured material thickness; but does not represent required wall thickness for safe operation. Inspectors in the field often cannot determine required thickness because the U-1A does not capture full design inputs (e.g., UG-22 loadings like external piping loads or vibration). This creates a gap when comparing UT readings vs. acceptable minimums. SG R&A July 2026 Meeting Action:

Item Number: A26-34 NBIC Location: Part 3, 9.1
General Description: Define "Sound Metal" Subgroup: Repairs and Alterations Task Group: None assigned. Explanation of Need: The term "sound metal" is being regarded as either the min thickness or original thickness and a definition as to what "thickness" is required to meet the NBIC requirements is needed. SG R&A July 2026 Meeting Action:

11. Future Meetings

- January 11-14, 2027 – Nashville, TN

12. Adjournment

Respectfully submitted,

Terrence Hellman

Terrence Hellman