

NATIONAL BOARD INSPECTION CODE TASK GROUP INTERPRETATIONS

AGENDA

Meeting of January 13th, 2025 Charleston, SC

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 Chair will call the meeting to order at 1:00 p.m. Eastern Time. For those attending in person, the meeting will be held in Palmetto & Carolina Room on the second floor of the hotel.

2. Roll call of Members and introduction of Visitors

3. Check for a Quorum

4. Awards/Special Recognition

5. Announcements

- This meeting marks the end of Cycle A 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 Hyatt Place rooftop bar, the Pour Taproom.
- 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 Grand Magnolia Foyer, and lunch will be served from 11:30 a.m. to 12:30 p.m. in Sterling Hall Foyer.
- Meeting schedules, meeting room layouts, and other helpful information can be found on the National Board website under the **NBIC** tab → NBIC Meeting Information.
- The NBIC Committee has transitioned from NB File Share to SharePoint. 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.
 - o Note that access to the NBIC SharePoint site is limited to committee members only.
 - ALL powerpoint attachments/presentations <u>must be sent to the NBIC Secretary for approval prior to the meeting.</u>
 - o 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.
 - o 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
 - o 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. The 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.

6. Adoption of the Agenda

7. Approval of the Minutes of the July 15, 2024, Meeting

The minutes are available for review on the National Board website, www.nationalboard.org.

8. Review of Rosters (Attachment Page 1)

a. Membership Nominations

Mr. Kiwi Derrick is interested in becoming a member of the Standing Task Group.

b. Membership Reappointments

The following memberships are scheduled to end prior to the July 2025 meeting: Mr. Michael Carlson, Mr. Phil Gilston, and Mr. Marty Toth.

c. Officer Nominations

Mr. Seime's term as Chair is set to end on July 31, 2024. The Task Group will need to nominate a new Chair. Note that Mr. Seime is eligible for reappointment to the position.

9. Interpretations

Item Number: I24-16 NBIC Location: Part 3, 2.5.3 e) Attachment Page 2

General Description: Volumetric Examination when using alternative welding methods without

PWHT

Subgroup: Repairs and Alterations

Task Group: M. Schaser (PM), T. McBee

Explanation of Need: The existing language, in its current form, does not make it clear whether volumetric examination is required when using alternative welding methods. The last phrase in the sentence sends the user to paragraph 4.2 which in turn sends the user back to the original code of construction. If a weld greater than 3/8 in. did not require volumetric examination at construction, then what purpose does the last sentence serve? The phrase on the other side of "or" where volumetric examination was required at construction is self-explanatory, but 4.2 permits using alternative NDE methods, suggesting MT or PT. These two methods are currently mandated "shall be" requirements in the first sentence of 2.5.3 e). If the intent is to require volumetric examination for welds greater than 3/8 in., and welds that required volumetric examination at construction, then there should be a firm statement to this effect.

July 2024 Meeting Action: M. Schaser presented a PR.

Item Number: I24-19 NBIC Location: Part 3, 4.2 No Attachment

General Description: NB-23 2023 Part 3, section 4, article 4.2 - Volumetric NDE on weld

Subgroup: Repairs and Alterations

Task Group: L. Dutra (PM), M. Quisenberry

Explanation of Need: The inquirer has a corroded zone of about 3 feet by 6 feet on a shell and head, and the depth does not exceed the corrosion allowance. The corrosion zone included a weld that was 100% RT. Is it ok with just MT NDE or need also Volumetric NDE of all the buildup area include base metal?

July 2024 Meeting Action: L. Dutra presented a PR.

Item Number: I24-25 NBIC Location: Part 3, 4.4.1 e) and 4.4.2 Attachment Page 4

c)

General Description: 4.4.1 (e) and 4.4.2 (c) NDE Methods

Subgroup: Repairs and Alterations

Task Group: R. Derby (PM), P. Gilston, J. Ferreira

Explanation of Need: 4.4.1 (e) and 4.4.2 (c) permit the use of NDE to verify the integrity of the repair of alteration. NDE methods other than what is listed in the original code of construction are being used for repair and alterations in some locations throughout the US. For example, Acoustic Emission Testing (AE) in accordance with ASME Section V Article 12 has been used on power boiler (HRSG) repairs. Acoustic Emission Testing is not an NDE method that is addressed in ASME Section I or Section VIII Div.1, but it is an NDE method in the reference code ASME Section V. Some inspectors are questioning this as AE is not an NDE method used in the original code of construction.

July 2024 Meeting Action: J. Ferreria presented a proposal which was revised. To go out as Rvw & Comment LB to INTERP TG.

Item Number: I24-34 NBIC Location: Part 3, 3.4.1 No Attachment

General Description: Rerating using OEM's design data to waive proof testing

Subgroup: Repairs and Alterations

Task Group: K. Moore (PM), B. Hrubala

Explanation of Need: A PV built in 1990 contains heads made of Class 40 cast iron. The heads were proof tested by the OEM and determined to be suitable for 160 psi MAWP. However, the OEM certified the vessel for only 125 psi due to customer requirements. Fast forward to present day, and the vessel owner now wants to Rerate the vessel to a higher pressure. The OEM is no longer in business, but the 'R' Holder is able to obtain a copy of the original proof test report by the OEM. Can it be acceptable for the 'R' Holder to Rerate the head above 125 psi, based on OEM records stating the design is good for higher pressure, without the 'R' Holder having to perform their own separate proof test?

The 'R' Holder would not be using the OEM proof test record for any new manufacturing, only for the purposes of altering an existing vessel or part within the confines of the original design.

July 2024 Meeting Action: Proposal was passed with 1 abstention (J. Ferreira).

NOTE: This item was presented as a Progress Report during the July 2024 Main Committee meeting.

Item Number: I24-36 NBIC Location: Part 3, 3.4 No Attachment

General Description: Alteration of Plate Heat Exchanger

Subgroup: Repairs and Alterations

Task Group: T. Seime (PM)

Explanation of Need: This question is asked frequently by Repair firms that want to increase the number of heat transfer plates.

July 2024 Meeting Action: Proposal was revised and accepted with 3 abstentions (G. Galanes, J. Ferreira, M. Toth).

NOTE: This item was presented as a Progress Report during the July 2024 Main Committee

meeting.

Item Number: I24-40 NBIC Location: Part 3, 3.3.2 e) Attachment Page 7

General Description: Routine repair vs Alteration

Subgroup: Repairs and Alterations

Task Group: M. Carlson (PM), D. Kinney

Explanation of Need: Some people use rules of thumb outside of the NBIC definition to make decision, these rules of thumb do not align with the written rules and cause project delays and extended outages.

July 2024 Meeting Action: M. Carlson presented a PR.

Item Number: I24-44 NBIC Location: Part 3, 2.5.3 No Attachment

General Description: Alternative weld methods and special services

Subgroup: Repairs and Alterations

Task Group: R. Derby (PM), P. Gilston

Explanation of Need: In section VIII Div.1 construction some special service conditions as described in UW-2 make mandatory PWHT when it is not otherwise required for the actual thickness of material and P-number. This subtlety leads some to believe that the use of the Alternative weld methods is either not allowed or that they can only be conducted as an alteration.

July 2024 Meeting Action: P. Gilston presented a PR. To be LB to INTERP TG when ready.

Item Number: I24-50 NBIC Location: Part 3, 2.2.1 and 2.2.3 No Attachment

General Description: Post Qualification of Welders and WPS/PQR

Subgroup: Repairs and Alterations

Task Group: K. Moore (PM), B. Hrubala

Explanation of Need: There are numerous instances in our organization where welders and WPS/PQR are being qualified after repairs have been done and the equipment were put back into service. The argument they give is that if the results pass then it's acceptable.

July 2024 Meeting Action: Close w/Letter to Inquirer that this is outside the scope of the NBIC.

NOTE: During the Subcommittee R&A meeting, K. Moore indicated that the proposal will be revised based on additional TG discussions.

New Interpretation Requests:

Item Number: I24-27 NBIC Location: Part 3 (formerly Part 2, Attachment Page 10

General Description: Replacement of Repair Nameplate

Subgroup: Repairs and Alterations

Task Group: None assigned.

Explanation of Need: There is a lack of clarity for replacing an Repair Nameplate that has become lost, illegible, or detached, and the stamping/markings required.

July 2024 Meeting Action: From Subcommittee Inspection's July 2024 meeting → The SG reviewed this Interpretation, and after a lot of discussion they believe this interpretation should be moved to be a Repairs & Alterations item. The information being questioned is not addressed in Part 2. After discussion, the SC agreed with the SG's decision to move this item to R&A.

January 2025 Meeting Action:

Item Number: I24-99 NBIC Location: Part 3, 5.2.2 c) Attachment Page 11

General Description: Preparation of Form R-2 Construction Scope

Subgroup: Repairs and Alterations

Task Group: M. Schaser (PM), J. Ferreira

Explanation of Need: Disposition if NDE and pressure testing is considered construction activity and R-2 fields "7-b", Construction Certification, and Certificate for Inspection are required.

January 2025 Meeting Action:

Item Number: I24-107 NBIC Location: Part 3, 3.3.3 j) Attachment Page 12

General Description: Addition of a nozzle details

Subgroup: Repairs and Alterations

Task Group: None assigned.

Explanation of Need: As this sort of configuration is compliant with the original Code Of Construction and guidance is supplied by an industry-recognized document on repair of pressure equipment, it isn't clear why it would be prohibited. When properly engineered and correctly installed, this sort of alteration could extend the life of damaged vessels.

January 2025 Meeting Action:

10. Future Meetings

• July 7-10, 2025 – Cincinnati, OH

• January 12-15, 2026 – New Orleans, LA

11. Adjournment

Respectfully submitted,

Terrence Hellman

Terrence Hellman, TG Interpretations Secretary

■ Task Group Interpretations (Repairs/Alterations)

Last Name	First Name	Interest Category	Role	Exp. Date	More
Seime	Trevor	Jurisdictional Authorities	Chair	08/19/2027	Details
Schaser	Matt	National Board Certificate Holders	Vice Chair	08/19/2027	Details
Hellman	Terrence		Secretary	12/31/2099	Details
Boseo	Brian	National Board Certificate Holders	Member	08/19/2027	Details
Carlson	Michael	Jurisdictional Authorities	Member	01/31/2025	Details
Derby	Robert	Labor	Member	07/31/2025	Details
Ferreira	Jonathan	Authorized Inspection Agencies	Member	01/31/2026	Details
Galanes	George	Users	Member	08/22/2026	Details
Gilston	Philip	Authorized Inspection Agencies	Member	01/31/2025	Details
Hrubala	Bernard	Authorized Inspection Agencies	Member	01/31/2027	Details
McBee	Timothy	Authorized Inspection Agencies	Member	08/19/2027	Details
Moore	Kathy	National Board Certificate Holders	Member	08/19/2027	Details
Quisenberry	Michael	National Board Certificate Holders	Member	08/19/2027	Details
Toth	Marty	General Interest	Member	01/31/2025	Details
Triplett	Andrew	National Board Certificate Holders	Member	08/22/2026	Details



SINCE 1919 OF BOILER AND PRESSURE VESSEL INSPECTORS

Subject:	Volumetric Examination when using alternative welding methods without PWHT				
NBIC Location:	2023 NBIC Part 3, 2.5.3 e)				
Statement of Need:	The existing language, in its current form, does not make it clear whether volumetric examination is required when using alternative welding methods. The last phrase in the sentence sends the user to paragraph 4.2 which in turn sends the user back to the original code of construction. If a weld greater than 3/8 in. did not require volumetric examination at construction, then what purpose does the last sentence serve? The phrase on the other side of "or" where volumetric examination was required at construction is self-explanatory, but 4.2 permits using alternative NDE methods, suggesting MT or PT. These two methods are currently mandated "shall be" requirements in the first sentence of 2.5.3 e). If the intent is to require volumetric examination for welds greater than 3/8 in., and welds that required volumetric examination at construction, then there should be a firm statement to this effect.				
Background Information:	A discussion arose during an NBBI examination question review, specifically whether welds greater than 3/8 in. (10 mm) deep or other welds in a pressure retaining item that were originally required to be volumetrically examined by the rules of the original code of construction are required to be volumetrically examined.				
Proposed Question:	Is volumetric examination required when using Alternative Weld Methods for welds greater than 3/8 in. or welds that required volumetric examination at construction?				
Proposed Reply:	Yes.				
Committee's Question:	Are the requirements for volumetric examination of weld repairs/alterations of cavities with depths 3/8-inch or greater, associated with alternative weld methods without PWHT as described in Part 3 paragraph 2.5.3.e, limited to those listed in Part 3 paragraph 4.2?				
Committee's Reply:	Yes.				

Rationale:	Paragraph 2.5.3.e indicates that weld repairs of cavities 3/8-inch or greater require additional examination in accordance with paragraph 4.2. No additional volumetric NDE requirements are listed in 2.5.3.e based on the current edition of NBIC (2025).
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PROPOSED INTERPRETATION

Item No.

124-25

Subject/Title

4.4.1 (e) and 4.4.2 (c) NDE Methods

Project Manager and Task GroupTBD

Source (Name/email)

Jon Ferreira / jonathan_ferreira@hsb.com

Statement of Need

There seems to be some confusion by inspectors and R certificate holders of what NDE methods are acceptable when NDE is used in lieu of a pressure test. The proposed questions will provide clarity on this matter.

Background Information

4.4.1 (e) and 4.4.2 (c) permit the use of NDE to verify the integrity of the repair of alteration. NDE methods other than what is listed in the original code of construction are being used for repair and alterations in some locations throughout the US. For example, Acoustic Emission Testing (AE) in accordance with ASME Section V Article 12 has been used on power boiler (HRSG) repairs. Acoustic Emission Testing is not an NDE method that is addressed in ASME Section I or Section VIII Div.1, but it is an NDE method in the reference code ASME Section V. Some inspectors are questioning this as AE is not an NDE method used in the original code of construction.

Proposed Question 1

May NDE methods not addressed in the original code of construction be used to verify the integrity of the repair of alteration?

Proposed Reply

Yes, provided the NDE method selected can provide meaningful results

Proposed Question 2

If the answer to question 1 is yes, is it required for the NDE method that is selected to have a written procedure following ASME Section V or another recognized national or international standard for the NDE method in question?

Proposed Reply

Yes

Proposed Question 3

If an NDE method that is not addressed in the original code of construction is used, do the NDE personnel performing the NDE method need to be certified to a written practice?

Proposed Reply

Yes

Committee's Question 1

May NDE methods not addressed in the original code of construction be used to verify the integrity of the repair of alteration?

Committee's Reply 1

Yes, with acceptance of the Inspector and the jurisdiction, if applicable, provided the NDE method selected can provide meaningful results

Rationale

4.4.2 a)

Committee's Question 2

If the answer to question 1 is yes, is it required for the NDE method that is selected to have a written procedure following ASME Section V or another recognized national or international standard for the NDE method in question?

Committee's Reply 2

Yes.

Committee's Question 3

If an NDE method that is not addressed in the original code of construction is used, do the NDE personnel performing the NDE method need to be certified to a written practice?

Committee's Reply 3

Yes

		VO					
COMMITTEE	Approved	Disapproved	Abstained	Not Voting	Passed	Failed	Date

PROPOSED INTERPRETATION

Item No.
24-40
Subject/Title
Routine repair vs Alteration
Project Manager and Task Group
Michael Carlson, Don Kinney, Craig Hopkins
Source (Name/Email)
Paul Shanks / paul.shanks@bureauveritas.com
Statement of Need
Some people use rules of thumb outside of the NBIC definition to make decision, these rules of thumb do not align with the written rules and cause project delays and extended outages
Background Information
Interpretation 19-25 clarifies that the examples of repairs and alteration are not exhaustive, Section 9 of NBIC part 3 provides for definitions of terms- those used for alteration and repair do not always and obviously match the examples.
Proposed Question
When replacing 2" tubes in boiler that are attached by welding, provided that the MAWP, Heating surface area and steaming capacity do not change may this activity be considered a routine repair?
Proposed Reply
Yes
Committee's Question 1
When the replacement of a tube is not considered to be an alteration by definition or when referencing NBIC Part 3, 3.4, may this activity be considered a Routine Repair?
Committee's Reply 1
Yes, when the applicable requirements in NBIC Part 3, 3.3.2 are met.
Rationale
Committee's Question 2
Committee's Reply 2
Rationale

	VOTE:						
COMMITTEE	Approved	Disapproved	Abstained	Not Voting	Passed	Failed	Date

CODE INTERPRETATIONS

Requests for code Interpretations shall provide the following:

a) Inquiry
Provide a condensed and precise question, omitting superfluous background information and, when possible, composed in such a way that a "yes" or a "no" reply, with brief provisos if needed, is acceptable. The question should be technically and editorially correct.

b) Reply

Provide a proposed reply that clearly and concisely answer the inquiry question. Preferably the reply should be "yes" or "no" with brief provisos, if needed.

c) Background Information

Provide any background information that will assist the committee in understanding the proposed Inquiry and Reply Requests for Code Interpretations must be limited to an interpretation of the particular requirement in the code. The Committee cannot consider consulting type requests such as:

A review of calculations, design drawings, welding qualifications, or descriptions of equipment or Parts to determine compliance with code requirements;

A request for assistance in performing any code-prescribed functions relating to, but not limited to, material selection, designs, calculations, fabrication, inspection, pressure testing, or installation; or

A request seeking the rationale for code requirements.

Subject: Replacement of Repair Nameplate

Location: Part: Inspection; Section: 5; Paragraph: 5.2.1

Statement of Need:

There is a lack of clarity for replacing a Repair Nameplate that has become lost, illegible, or detached, and the stamping/markings required.

Background:

There is a lack of clarity for replacing a Repair Nameplate that has become lost, illegible, or detached, and the stamping/markings required.

Proposed Question:

- 1. Q1- Does the replacement of a Repair Nameplate require the manufacturer of the pressure-retaining item be contacted per 5.2.1 a)?
- 2. Q2 Is the "R" Stamp required to be on a "Replacement" Repair Nameplate?
- 3. Q3 May an "R" Cert. Holder other than the original company whose repair nameplate is being replaced, stamp their own "R" Stamp on a "Replacement" repair nameplate?

Proposed Reply:

- 1. A1-No. The original manufacturer has no bearing on the repair nameplate.
- 2. A2-No. Only the original organization that made the "R" Stamp repair on the date indicated on the original repair nameplate may stamp the "R" Certificate symbol for a repair in accordance with the NBIC.
- 3. A3-No.

Committee's Question:

Committee's Reply:

Rationale: Replacement of repair nameplates are not addressed in Part 2.



Subject:	Preparation of Form R-2 Construction Scope				
NBIC Location:	2023 NBIC Part 3, 5.2.2 c)				
Statement of Need:	Disposition if NDE and pressure testing is considered construction activity and R-2 fields "7-b", Construction Certification, and Certificate for Inspection are required.				
Background Information:	Re-rate performed on ASME Section VIII Division 1 pressure vessel where NDE (Ultrasonic and liquid penetrant) along with a liquid pressure test were performed. R certificate holder only performed design and no construction activities. Design Certification and Certification of Design Change Review sections are completed leaving the remaining sections blank.				
Proposed Question:	When the same R certificate holder performs a re-rate utilizing form R-2 and no physical changes are made only performing NDE and pressure testing, must the Construction Certification and Certificate for Inspection sections of form R-2 be completed when the Design Certification and Certification of Design Change Review sections are completed?				
Proposed Reply:	Yes, fields 7b, Construction Certification, and Certificate for Inspection are required. or No, only Design Certification and Certification of Design Change Review sections are required.				
Committee's Question:	<question(s) as="" be="" can="" committee="" interpret.="" proposed="" question="" same="" the="" will="" wording=""></question(s)>				
Committee's Reply:	<yes no="" or="" response=""></yes>				
Rationale:	<additional clarification="" for="" response=""></additional>				



SINCE 1919 OF BOILER AND PRESSURE VESSEL INSPECTORS

Subject:	Addition of a nozzle details
NBIC Location:	2023 NBIC Part 3, 3.3.3 j)
Statement of Need:	Further guidance on this section.
Background Information:	Certificate holder would like to install a new nozzle into vessel head. Vessel has many different nozzle designs into top head, bottom head, and shell. Nozzles are installed with reinforcement, without reinforcement, set-on, set-in, and at different angles from the vessel. Seeking more definition on NBIC "located in a similar part of vessel" and "identical" to one of original design. Certificate holder would like to utilize a nozzle design on vessel head at a different arc on the head where the nozzle's axis will be different from the head. Vessel is vertically oriented and current nozzle is connected to head on a horizontal axis. New nozzle would be installed vertically.
Proposed Question:	When installing a new nozzle when reinforcement is a consideration, 1) does the statement "located in a similar part of the vessel" mean it must be from the head or shell and utilized on the head or shell? If yes, must the design for the nozzle on the head be located on a similar arc of the head? 2) does the statement "identical" mean every aspect of the nozzle design must be copied? Would a current nozzle without reinforcement be utilized for installation with reinforcement? 3) does the orientation or angle of the nozzle from its axis limit its use for this intention?
Proposed Reply:	Further guidance is requested on the above three items. Yes or no responses with some guidance would be expected proposed reply.
Committee's Question:	<question(s) as="" be="" can="" committee="" interpret.="" proposed="" question="" same="" the="" will="" wording=""></question(s)>
Committee's Reply:	<yes no="" or="" response=""></yes>
Rationale:	<additional clarification="" for="" response=""></additional>