



*THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS*

NATIONAL BOARD INSPECTION CODE TASK GROUP INTERPRETATIONS

MINUTES

**Meeting of January 9, 2023
Charleston, SC**

These minutes are subject to approval and are for the committee use only. They are not to be duplicated or quoted for other than committee use.

The National Board of Boiler & Pressure
Vessel Inspectors 1055 Crupper Avenue
Columbus, Ohio 43229-
1183
Phone: (614)888-8320
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1. Call to Order

Chair Seime called the meeting to order at 1:00 p.m. EST. For those attending in person, the meeting will be held in Carolina A on the Mezzanine Level of the hotel.

2. Roll call of Members and introduction of Visitors

Secretary Hellman called roll of the Members and held introductions of visitors. ([Attachment 1](#))

3. Check for a Quorum

Secretary Hellman verified a quorum was reached.

4. Awards/Special Recognition

5. Announcements

- The National Board will be hosting a reception on Wednesday evening from 6:30 p.m. to 8:30 p.m. in the Colonial Ballroom at the hotel.
- The National Board will be hosting breakfast and lunch on Thursday. Breakfast will be served from 7:00 a.m. to 8:00 a.m. in the Colonial Ballroom, and lunch will be served from 11:30 a.m. to 12:30 p.m. in the Colonial Ballroom.

6. Adoption of the Agenda

a. The following revisions were made to the Agenda:

- **Editorial:** Added July 2023 Future Meeting Location (St. Louis, MO)
- **Corrected:** I22-33 Explanation of Need
- **Added:**
 - I23-01
 - I23-02

b. The agenda was unanimously accepted, as revised.

7. Approval of the Minutes of the July 11th, 2022, Meeting

The minutes are available for review on the National Board website, www.nationalboard.org. The Minutes were motioned, seconded, and unanimously approved (UA).

8. Review of Rosters

a. Membership Nominations

i. Mr. Matt Schaser and Mr. Jon Ferreira would like to be considered for INTERP Task Group membership.

- J. Ferreira – Approved by TG INTERP with 1 Abstention –
 - Phil Gilston Abstained from voting on Mr. Ferreira, as they work for the same AIA).
- M. Schaser – UA by TG INTERP

b. Membership Reappointments

None

c. Officer Nominations

None

9. Interpretations

Item Number: I21-79	NBIC Location: Part 3, 3.3.3(h)(2)	Attachment 2
General Description: Mechanical Replacement of Shell or Head		
Subgroup: Repairs and Alterations		
Task Group: B. Schaefer (PM), M. Quisenberry		
Explanation of Need: This interpretation and corresponding Code revision (A21-80) would provide clarity to NBIC users and address whether mechanical replacement of these components is considered a repair.		
INT TG July 2022 Meeting Action: M. Quisenberry presented a PR		
Jan 2023 Meeting Action: M. Quisenberry presented. Discussion took place if 3.3.3 h) should be revised via an Action Item to specify "Welded repair/replacement". The Committee Q & A were revised to identify the mechanical replacement of a shell or head is a Mech repair but is not required to be documented on a Form R-1. Approved with 1 No Vote (P. Gilston)		

Item Number: I22-14	NBIC Location: Part 3, 3.2.2 b) and c)	Attachment 3
General Description: Overlaid Replacement Parts		
Subgroup: Repairs and Alterations		
Task Group: T. McBee (PM), M. Carlson, D. Kinney, M. Quisenberry, P. Gilston, J. Ferreira		
Explanation of Need: Replacement parts that are documented using a Manufacturer's Partial Data report that have been inspected by an Authorized Inspector may still be supplied as a replacement part under paragraph 3.2.2 b) and therefore not require a Hydro test per Paragraph 3.2.2 e). Panels made from Overlaid tubes and for single overlaid tube Dutchman that contain only weld overlay, where the overlay is not considered to be pressure retaining when the overlay is not considered part of the strength of the boiler tube per ASME Section I PW-44. May be supplied as replacement parts under paragraph 3.2.2 b). The purpose of the overlay is to extend the life of boiler tubes in the waste to energy corrosive environment from external wear.		
July 2022 Meeting Action: T. McBee presented. Additional members added to task group. This was a PR.		
NOTE: This item is currently being balloted to Main Committee for approval.		
Jan. 2023 Meeting Action: T. McBee reminded the group this item is currently being balloted to Main Committee for approval.		

New Interpretation Requests:

Item Number: I22-24 NBIC Location: Part 3, 3.3.4.8 Attachment 4
<p>General Description: Repair of pressure retaining items without complete removal of defect</p> <p>Subgroup: Repairs and Alterations</p> <p>Task Group: M. Quisenberry (PM), L. Dutra</p> <p>Explanation of Need: 3.3.4.8 does imply that the defect should be known in regards to characteristics such as orientation, nature, depth, configuration but does not fully state this.</p> <p>January 2023 Meeting Action: M. Quisenberry presented. The Committee Q & A were revised. The proposal was UA as revised.</p>

Item Number: I22-25 NBIC Location: Part 3, 3.3.2 e) 5) Attachment 5
<p>General Description: ASME Section I Watertube Boilers – Plugging Tubes</p> <p>Subgroup: Repairs and Alterations</p> <p>Task Group: D. Kinney (PM), R. Derby</p> <p>Explanation of Need: The last item in paragraph 3.3.2 e) reads, “5) Seal welding a mechanical connection for leak tightness where by design, the pressure retaining capability is not dependent on the weld for strength and requires no PWHT.” A repair organization used this paragraph as justification to document a seal welded tube plug on a watertube boiler as routine.</p> <p>January 2023 Meeting Action: To be voted on at MC.</p>

Item Number: I22-33	NBIC Location: Part 3, 3.4.3	Attachment 6
<p>General Description: Encapsulation of Shells and Heads</p> <p>Subgroup: Repairs and Alterations</p> <p>Task Group: M. Quisenberry (PM), , R. Derby, ADDED: L. Dutra</p> <p>Explanation of Need: To clarify that encapsulation cannot be used to maintain the pressure retaining capability of shells and heads of pressure retaining items.</p> <p>January 2023 Meeting Action: M. Quisenberry presented. Added L. Dutra to TG. Proposal was UA as revised.</p>		

Item Number: I23-01	NBIC Location: Part 3, 5.2 & 5.7.1	Attachment 7
<p>General Description: Stamping Requirements for Repairs and Alterations</p> <p>Subgroup: Repairs and Alterations</p> <p>Task Group: NEW</p> <p>Explanation of Need: There is at least one instance where a nameplate has not been attached to a PRI and the R Form has already been signed. When questioned, the Inspector aptly stated there is no "shall be" requirement in the NBIC for the nameplate to be attached prior signing the R Form. Neither NBIC Part 3, 5.2, 5.7.1 nor the RCI 1, 5 3.12 make this a "shall be" requirement.</p> <p>January 2023 Meeting Action: T. Seime presented. G. Galanes pointed out that an Action Item revising 5.7.1 will be needed to go with this Interpretation. J. Ferreria will be the PM for a new Action Item to be opened. This Interp was UA.</p>		

Item Number: I23-02	NBIC Location: Part 3, 1.3.2	Attachment 8
<p>General Description: Jurisdictional requirements not meeting NBIC requirements</p> <p>Subgroup: Repairs and Alterations</p> <p>Task Group: NEW</p> <p>Explanation of Need: This Interpretation will clarify that when a Jurisdictional requirement does not meet an NBIC requirement or an NBIC requirement is diminished, the National Board "R" stamp shall not be applied, nor will the R Form be signed.</p> <p>January 2023 Meeting Action: T. Hellman presented. The proposal was revised and UA.</p>		

10. Future Meetings

- July 2023 – St. Louis, MO
- January 2024 – Charlotte, NC

11. Adjournment

Chair Seime adjourned the meeting at 2:58 PM.

Respectfully submitted,

Terrence Hellman

Terrence Hellman, TG Interpretations Secretary

Full Name	Email Address	Company Name	Title	Registration Type	Column1		
AHMED, S M FAYSAL	smfaysal.ahmed@rsc-bd.org	RMG SUSTAINABILITY COUNCIL	BOILER SAFETY ENGINEER	Remote		In-Person Members:	5
Black, Kim	rkjblack@aol.com	American Boiler Manufacturers Association	Technology Consultant	In-person		In-Person Visitors:	5
Calderon, Benjamin	benjamin.calderon@libertymutual.com	Liberty Mutual Insurance	Chief Engineer	In-person	1	Remote Members:	0
Creaser, Eben	Eben.creaser@gnb.ca	Province of New Brunswick	Chief Boiler Inspector	In-person	1	Remote Visitors:	5
Dinic, Caslav	cdinic@tssa.org	Technical Standards and Safety Authority - Ontario	Supervisor Technical Services	In-person	1		15
Hellman, Terry	thellman@nationalboard.org	National Board	Senior Staff Engineer	In-person	1	6 Members = 4 Quorum	
Henry, Harrington	harrington.henry@tuvsud.com	ARISE Inc.	Senior Boiler and Machinery Consultant	In-person			
Patel, Tusharkumar	tusharpatel0914@gmail.com	TUV Nord Group	Inspection Engineer	Remote			
Ponce, Luis	lponce@nbbi.org	NBBI	Manager of Technical Services	In-person			
Schaefer, Ben	bschaefer@aep.com	American Electric Power	Quality Control Manager	In-person	1		
Scribner, Gary	gscribner@nationalboard.org	National Board	Assistant Executive Director, Technical	In-person			
SHAH, M. A.	abmindustrialservices@gmail.com	ABM Industrial Services Inc.	Technical Manager	Remote	1		
Shear, Emily	Emily@stateboilerinspectors.com	Arizona Boiler Inspectors	GM	Remote			
Simmons, Douglas	Heatsolutionsllc@aol.com	1st Heating Solutions llc	ceo	Remote			
Spuhl, Raymond	RAYMOND_SPUHL@HSB.COM	The Hartford Steam Boiler Inspection and Insurance Company	Manager Code Services	In-person	1		
Moore, Kathy					1		

Bryan Toth

1



PROPOSED INTERPRETATION

Item No. 21-79
Subject/Title Mechanical Replacement of Shell or Head
Project Manager and Task Group
Source (Name/Email) Robert Underwood / robert_underwood@hsb.com
Statement of Need This interpretation and corresponding Code revision would provide clarity to NBIC users and address whether mechanical replacement of these components is considered a repair.
Background Information There are two conflicting NBIC interpretations relating to mechanical replacement of parts. Interpretation 01-29 states that NBIC neither requires nor prohibits documenting mechanical repair installation on a Form R-1. Recently passed interpretation 19-11 states that mechanical replacement of pressure retaining components in ASME Section VIII, Div. 3 vessels are considered a repair activity. 19-11 cites paragraph 3.3.3 which provides examples of repairs. Paragraph 3.3.3(h)(2) specifically states that replacement of head or shell in accordance with the original design. It does not specify whether head was replaced by welding or mechanical attachment.
Proposed Question Is mechanical replacement of a shell or head of a pressure retaining item considered a repair activity?
Proposed Reply Yes, see Part 3, 3.3.3(h).
Committee's Question 1 Q1: Is mechanical replacement of a shell or head of a pressure retaining item considered a repair? Q2: Is this repair required to be documented on Form R-1?
Committee's Reply 1 A1: Yes A2: No
Rationale TG INTERP considers this a Mechanical Repair. This is not a welded repair requiring documentation on a Form R-1.
Committee's Question 2
Committee's Reply 2
Rationale

From: [Gilston Philip - Hartford-HSB](#)
To: [Terrence Hellman](#)
Subject: Item 21-79
Date: Monday, January 9, 2023 2:09:44 PM

Terrence,

Voted against based on question 2, do not see were there are words in the Code to support the response of No.

Philip Gilston MSc, CEng, MWeldI, IWE
Principal Engineer, Codes and Standards

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THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS

PROPOSED INTERPRETATION

Item No. 22-14
Subject/Title Overlaid Replacement Parts
Project Manager and Task Group Tim McBee – PM, Mike Carlson, Don Kinney, Michael Quisenberry, Phil Gilston, Jon Ferreira.
Source (Name/Email) Harold Greer / Harold.greer32@yahoo.com
Statement of Need Replacement parts that are documented using a Manufacturer's Partial Data report that have been inspected by an Authorized Inspector may still be supplied as a replacement part under paragraph 3.2.2 b) and therefore not require a Hydro test per Paragraph 3.2.2 e). Panels made from Overlaid tubes and for single overlaid tube Dutchman that contain only weld overlay, where the overlay is not considered to be pressure retaining when the overlay is not considered part of the strength of the boiler tube per ASME Section I PW-44. May be supplied as replacement parts under paragraph 3.2.2 b). The purpose of the overlay is to extend the life of boiler tubes in the waste to energy corrosive environment from external wear.
Background Information ASME Section I PG-112.6 states that a P-4 is neither required nor prohibited for pressure parts that do not contain pressure-retaining welds. NBIC Part 3 section 3 paragraph 3.2.2 c)replacement parts subject to internal or external pressure fabricated by welding, "which require inspection by an Authorized Inspector"..... An inspector could interpret this as, any replacement part that is certified with a form P-4 would therefore require inspection by an Authorized Inspector and would then require a Hydro test by paragraph 3.2.2 e) prior to installation in the boiler. It is the opinion of this manufacturer that Overlaid boiler tubes where the overlay is not considered as part of the strength of the boiler tube per PW-44 of ASME Section I, is not pressure retaining. Hydro testing of Weld Overlay would not provide meaningful data and would require excessive costs for no benefit. Such as performance of 200 hydro tests at 1.5 x MAWP for section I, for 200 Overlaid tube Dutchmen, where each tube must be witnessed by the Inspector prior to installation in a boiler. Whereas, after installation there are 400 actual pressure retaining welds in a single test at a pressure that need only verify leak tightness and the acceptance of the inspector.
Proposed Question Q1) May a boiler furnace wall panel that contains no pressure retaining welds and has been documented on a P-4 Manufacturer's Partial Data Report in accordance with PG-112.6 of ASME Section I, be provided as a replacement part in accordance with NBIC Part 3, 3.2.2 b)? Q2) The same panel referred to in Q1 is manufactured with a weld overlay that is not part of the strength of the boiler tube (corrosion resistance, hard facing, etc...) and documented on a P4 Manufacturer's Partial Data Report in accordance with PG-112.6 of ASME Section I. May this wall panel be provided as a replacement part in accordance with NBIC Part 3, 3.2.2 b)? Q3) May overlaid boiler tubes, where the overlay is not pressure retaining and is not considered part of the strength of the boiler tube per ASME Section I , PW-44, supplied individually, may these overlaid tubes be provided as a replacement part in accordance with Paragraph 3.2.2 b)?
Proposed Reply Q1) YES Q2) YES Q3) YES
Committee's Question 1 1. May boiler tubes or boiler tube panel assemblies that contain no pressure retaining welds with <u>hard-facing or</u> corrosion resistance overlay be supplied as a replacement part?
Committee's Reply 1 1. Yes.
Rationale NBIC Part 3, paragraph 3.2.2 b).

Committee's Question 2

2. Are boiler tubes or boiler tube panel assemblies that contain no pressure retaining welds with hard-facing or corrosion resistance overlay required to be pressure tested?

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Committee's Reply 2

2. No.

Rationale

NBIC Part 3, paragraph 3.2.2 e).

Committee's Question 3

3. Are boiler tubes or boiler tube panel assemblies that contain no pressure retaining welds with hard-facing or corrosion resistance overlay required to be provided with a partial data report?

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Committee's Reply 3

3. No, partial data reports are neither required nor prohibited.

Rationale

NBIC Part 3, paragraph 3.2.2 c) and ASME Section I, PG-112.6.

PROPOSED INTERPRETATION

Item No. 22-24
Subject/Title Repair of pressure ret'ing items without complete removal of defect
Project Manager and Task Group M. Quisenberry (PM), L. Dutra
Source (Name/Email) Fazlollah (Fred) Afshar / fredafshar@bandmriskadvice.com
Statement of Need 3.3.4.8 does imply that the defect should be known in regards to characteristics such as orientation, nature, depth, configuration but does not fully state this.
Background Information On a 1 1/2" thick 304 H reactor operating normally in vacuum and around 1200 degrees F, cracking is found on the lower head to shell joint. Grinding to 1 1/4" thick has eliminated more than 60% of the cracks but still in areas not accessible, the cracks do exist. Detection requires special phased array sensor that is being built but not yet available. Client is citing NB 3.3.4.8 for the cracks left in place and planning to return to operation. Question is submitted to seek the Committee's view.
Proposed Question Q: If the size, orientation and/ or the contour of the defect may not be fully established, would the provisions of 3.3.4.8 be applicable? 3.3.4.8 Repair of pressure retaining items without complete removal of defects does not address the situation where the defect (i.e. cracks) characteristics are not fully established due to geometrical configuration of internals or other physical obstacles not allowing use of available NDE techniques to fully study the size, orientation and configuration of cracks.
Proposed Reply No. The defect shall be characterized in full per the requirements of NBIC 3.3.4.8 Part A
Committee's Question 1 If the size, orientation and/ or the contour of the defect may not be fully established, would the provisions of 3.3.4.8 be applicable?
Committee's Reply 1 No.
Rationale
Committee's Question 2
Committee's Reply 2
Rationale



PROPOSED INTERPRETATION

Item No. 22-25
Subject/Title ASME Section I Watertube Boilers – Plugging Tubes
Project Manager and Task Group
Source (Name/Email) Luis Ponce / lponce@nationalboard.org
Statement of Need The last item in paragraph 3.3.2 e) reads, “5) Seal welding a mechanical connection for leak tightness where by-design, the pressure retaining capability is not dependent on the weld for strength and requires no PWHT.” A repair organization used this paragraph as justification to document a seal welded tube plug on a watertube boiler as routine.
Background Information In at least one jurisdiction, a repair organization submitted a completed and certified R-1 Report of Repair Form as a “Routine Repair” to the Chief Inspector with the scenario in the statement of need. Neither the Repair firm nor the Inspector contacted the Jurisdiction prior to designating the plugging of the watertube as a “Routine Repair.”
Proposed Question Question 1 - A leaking tube is removed on a watertube boiler, and the repair organization installs and seal welds a plug into the tube opening in the shell drum. May this work be considered a routine repair as specified in NBIC, Part 3, 3.3.2e) 5)? Question 2 - A leaking tube is not removed on a watertube boiler, and the repair organization installs and seal welds a plug into the tube material that remains in the shell drum. May this work be considered a routine repair as specified in NBIC, Part 3, 3.3.2e) 5)?
Proposed Reply Reply 1 - No. Tube plugging is not considered a permanent repair, therefore it shall not be considered routine. Competent technical advice from the boiler manufacturer or from another qualified source shall be obtained prior to seal welding tube plugs on watertube boilers. Reply 2 - No, tube plugging is not considered a permanent repair, therefore it shall not be considered routine. Competent technical advice from the boiler manufacturer or from another qualified source shall be obtained prior to seal welding tube plugs.
Committee's Question 1
Committee's Reply 1
Rationale
Committee's Question 2
Committee's Reply 2
Rationale



PROPOSED INTERPRETATION

Item No. 22-33
Subject/Title Encapsulation of Shells and Heads
Project Manager and Task Group
Source (Name/Email) Robert Underwood / robert_underwood@hsb.com
Statement of Need To clarify that encapsulation cannot be used to maintain the pressure retaining capability of shells and heads of pressure retaining items.
Background Information A pressure vessel owner believes PCC-2 allows encapsulation of components other than what's listed in 3.4.3 of Part 3 (such as heads) and therefore it should be acceptable per the NBIC. Paragraph 3.4.3 clearly indicates that the encapsulation method only applies to pipe, nozzles, fittings, and valves. This proposal would reinforce existing wording in Part 3.
Proposed Question Does the NBIC Part 3, paragraph 3.4.3, allow for the encapsulation of components other than pipe, nozzles, fittings, and valves?
Proposed Reply No.
Committee's Question 1 Does the NBIC Part 3, paragraph 3.4.3, allow for the encapsulation of components other than pipe, nozzles, fittings, and valves?
Committee's Reply 1 No.
Rationale
Committee's Question 2
Committee's Reply 2
Rationale



PROPOSED INTERPRETATION

Item No. 23-01
Subject/Title Stamping Requirements for Repairs and Alterations
Project Manager and Task Group
Source (Name/Email) Luis Ponce / lponce@nationalboard.org
Statement of Need There is at least one instance where a nameplate has not been attached to a PRI and the R Form has already been signed. When questioned, the Inspector aptly stated there is no "shall be" requirement in the NBIC for the nameplate to be attached prior signing the R Form. What happens if that Inspector is reassigned or resigns? The stamping/nameplate may never be completed.
Background Information A discussion a a recent NBIC activity brought this topic to light about at least one repair/alteration where the R Form was signed but the stamping/nameplate has not been completed/attached. The NBIC Part 3, 5.2, 5.7.1 nor the RCI-1, 5-3.12 do not make this a "shall be" requirement.
Proposed Question For NBIC Part 3 repairs and alterations, is it the intent for stamping or attaching a nameplate in 5.7.1 to be completed prior to signing the R Form by the "R" Certificate Holder and the Inspector?
Proposed Reply Yes
Committee's Question 1 For NBIC Part 3 repairs and alterations, is it the intent for stamping or attaching a nameplate in 5.7.1 to be completed prior to signing the R Form by the "R" Certificate Holder and the Inspector?
Committee's Reply 1 Yes
Rationale
Committee's Question 2
Committee's Reply 2
Rationale



PROPOSED INTERPRETATION

Item No. 23-02
Subject/Title Jurisdictional requirements not meeting NBIC requirements
Project Manager and Task Group
Source (Name/Email) Terrence Hellman / thellman@nationalboard.org
Statement of Need This Interpretation will clarify that when a Jurisdictional requirement does not meet an NBIC requirement or an NBIC requirement is diminished, the National Board "R" stamp shall not be applied nor will the R-Form be signed.
Background Information This Interpretation will clarify that when a Jurisdictional requirement does not meet an NBIC requirement or an NBIC requirement is diminished, the National Board "R" stamp shall not be applied nor will the R-Form be signed.
Proposed Question When a Jurisdictional requirement does not meet an NBIC requirement or an NBIC requirement is diminished, shall the National Board "R" stamp be applied and the applicable R-Form(s) be signed?
Proposed Reply No.
Committee's Question 1
Committee's Reply 1
Rationale
Committee's Question 2
Committee's Reply 2
Rationale