



THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS

Date Distributed:

NATIONAL BOARD INSPECTION CODE SUBCOMMITTEE INSPECTION

MINUTES

Meeting of January 15, 2025
Charleston, SC

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

1. Call to Order

Mr. Mark Horbaczewski, Subcommittee Inspection (SC) Chair, called the meeting to order at 8:01 am Eastern Standard Time in Grand Magnolia A on the 2nd floor of the hotel.

2. Introduction of Members and Visitors

Secretary, Ms. Jodi Metzmaier did a roll call of all SC members in person and online. All visitors in person and online stated their name and their company. All members and visitors are noted on the attendance sheets. (Attachment Pages 1-2)

3. Check for a Quorum (51% - 22 Members, need at least 12 for Quorum)

With 20 of 22 members in attendance, both in person and online, a quorum was established.

NOTE: James Calvert will not have a vote for this SC meeting, as his memberships was not renewed at the last meeting. His membership reappointment will be voted during this meeting, will be sent to MC for approval, and then will be sent to Rob Troutt, Chair of the BOT for final approval. He should be a voting member again at the July 2025 meeting.

4. Awards/Special Recognition

- Tim Barker – 15 years on SC Inspection
- Mark Horbaczewski – 15 Years on SC Inspection

Mr. Horbaczewski presented Mr. Barker with his 15-year pin. He spoke about Mr. Barker, as this will be his last meeting.

Ms. Metzmaier presented Mr. Horbaczewski with his 15-year pin.

5. Announcements

Ms. Metzmaier gave announcements to the SC (Attachment Page 3)

6. Adoption of the Agenda

A motion was made to adopt the agenda. The motion was seconded. The below items were added to the agenda:

- Add **Part 2/3 Task Group Items** under **Open Items Related to Inspection**
- Add Membership reappointment for James Calvert to SC Inspection.
- Add Membership nominations for Clay Moultrie, Brandon Steinhart, & William Ross to SG Inspection.
- Add Membership nominations for Clay Moultrie, Brandon Steinhart, Bill Ross, & Tim Bolden to SC Inspection.
- Add Presentation on Quick Actuating Closures.

The motion was revised to adopt the revised agenda, and the motion was **unanimously approved**.

7. Approval of the Minutes of the July 17, 2024, Meeting

A motion was made to approve the SC minutes from the July 2024 meeting. The motion was seconded and unanimously approved.

8. Review of Rosters

a. Membership Nominations

- **SUBGROUP:** Clay Moultrie (Manufacturers), Brandon Steinhart (Authorized Inspection Agencies), William Ross (Jurisdiction) are interested in becoming members.

Mr. Ross spoke to the SC on his behalf stating why he would like to be a member of the SG, as his nomination was not discussed during the SG meeting.

A motion was made to accept all 3 nominees for recommendation. The motion was seconded and **unanimously approved**.

- **SUBCOMMITTEE**: Clay Moultrie (Manufacturers), Brandon Steinhart (Authorized Inspection Agencies), William Ross (Jurisdiction), & Tim Bolden (Authorized Inspection Agencies) are all interested in becoming members.

The 4 nominees spoke to the group stating why they would like to be a member of the SC. The nominees left the room while the SC discussed the balance of interest categories within the SC. During discussion, it was noted that we would be out of balance if we add 2 new members with the interest category of “Authorized Inspection Agency”. At this point Mr. Buechel noted to the group that he will also be retiring, and this would be his last meeting as a member. With his retirement, this opened a new spot for another AIA. A motion was then made to accept all nominees. **The motion passed with 1 abstention.**

b. Membership Reappointments

- **SUBGROUP**: The following members are up for reappointment: Tim Bolden, Venus Newton, Jerry Jessick, and James Calvert.
A motion was made to recommend reappointment of all members. The motion was seconded and **unanimously approved.**
- **SUBCOMMITTEE**: The following members are up for reappointment: Mr. Venus Newton & James Calvert.
Mr. Newton & Mr. Calvert confirmed they would like to be reappointed to the SC. A motion was made to recommend reappointment for both members. The motion was seconded and **unanimously approved.**

c. Officer Appointments - None

- 9. Presentation on Quick Actuating Closures** – The Inspection SC joined to R&A SC meeting through teams to listen to the presentation on Quick Actuating Closures.

10. Open Items Related to Inspection

a. Part 2/3 Task Group Items

- 22-06 - General Description:** Part 2 task group to review Part 3 Item 21-53 (see below)
- 23-08 - General Description:** Part 2 task group to review Part 3 Item 21-67 (note: item 21-67 had a proposal that passed through SG/SC R&A and MC in January 2024.)
- 24-28 - General Description:** Applying PWHT to previously "as welded" item

Mr. Horbaczewski gave a report on these items based on the conversations from the Part 2/3 Meeting earlier in the week.

b. PRD

- Item 24-91** – Require means to prevent safety valve discharge piping blockage for LCDSV (Part 4).
No action was taken by the SC for this item.

c. R&A

- Item 21-53** – Post repair inspection of weld repairs to CSEF steels. (P. Gilston as PM)
Mr. Horbaczewski & Mr. Bolden gave the SC an update on this item.
- Item 24-18** – Definition of Controlled Fill (P. Gilston as PM)
Mr. Horbaczewski discussed this item with the SC. The SC reviewed the definition. The question was brought up that this definition is in EPRI, and it was questioned why it wasn't the same. It was also brought up that the definition isn't necessarily a definition. A motion was made to accept the definition. The motion was seconded. **With 4 abstentions** (V. Scarcella, D. Graf, B. Ray, J. Jessick) **the SC approved this definition.**

- 11. Interpretations.** - There are currently no open interpretation items for Part 2.

12. Action Items

a. TG FRP Items

Item Number: NB16-1402	NBIC Location: Part 2, New Supplement	No Attachment
General Description: Life extension for high pressure FRP vessels above 20 years		
Subgroup: FRP Task Group: M. Gorman (PM)		
Update from the October 2024 TG FRP Meeting: The task group is finalizing the proposal for this item and should have something ready to present at the July 2025 meeting.		
January 2025 Meeting Action: Progress Report. The Inspection SC took no action on this item.		

b. TG Historical Items

Item Number: 23-85	NBIC Location: Part 2, S2.14.7	No Attachment
General Description: Review paragraphs to replace with proper verbiage		
Subgroup: SG Historical Task Group: M. Wahl (PM), K. Anderson		
Explanation of Need: There is some slang and second person (POV) verbiage throughout these paragraphs. Recommend rewording with proper terminology (such that it could be understood internationally) and changing point of view (e.g., changing "you're pulling water" to "water is being pulled"). Since I don't have the technical knowledge to know what is slang and what isn't, what I have proposed will still need to be reworded.		
January 2025 Meeting Action: Progress Report was given at the Historical TG meeting.		

c. TG Locomotive Items

Item Number: 24-78	NBIC Location: Part 2, S1.2.4.22	No Attachment
General Description: Minimum Washout Plug Thread Engagement		
Subgroup: Locomotive Task Group: B. Zeigler (PM), E. Armpriester, D. Domitrovich		
Explanation of Need: Text should be changed to clarify how minimum thread engagement is quantified.		
January 2025 Meeting Action: Progress Report. This is a new item and the Locomotive TG created as task group.		

d. SG Inspection Items

Item Number: 21-47	NBIC Location: Part 2, 2.2.4 & 2.2.5	Attachment Page 4
General Description: To provide better guidance as it relates to carbon monoxide		
Subgroup: Inspection		
Task Group: W. Hackworth (PM), V. Scarcella, D. Buechel, T. Barker, T. Bolden, M. Sansone, H. Henry, J. Castle, J. Morgan, & J. Clark		
Explanation of Need: Need to provide more comprehensive items to be reviewed to guide the inspector on carbon monoxide and combustion air.		
January 2025 Meeting Action: Ms. Metzmaier reported that a revised proposal for this item was approved by Subgroup Inspection and was balloted to Subcommittee Inspection. The ballot failed due to lack of participation. Mr. Scarcella presented the proposal to the SC. This SC reviewed this proposal again, and a motion was made to accept the proposal as presented. The motion was seconded and with one opposed (V. Newton), the proposal has been approved . This item should be sent to MC for voice vote.		
Item Number: 22-26	NBIC Location: Part 2, 2.3.6.8	No Attachment
General Description: Addition of cast acrylic as a pressure vessel material		
Subgroup: Inspection		
Task Group: J. Calvert (PM), V. Newton, D. Buechel, D. Rose		
Submitted by: J. Calvert		
Explanation of Need: Provide inspectors with the criteria necessary to competently inspect vessels like acrylic chromatography columns.		
January 2025 Meeting Action: It was stated that the SG closed this item with no action . A motion was made to close this item with no action. The motion was seconded and unanimously approved .		
Item Number: 23-27	NBIC Location: Part 2, 1.5.1	Attachment Page 5
General Description: Addition of requirement for Inspector to be present for inspections.		
Subgroup: Inspection		
Task Group: V. Newton (PM), V. Scarcella, T. Bolden, J. Morgan, J. Smith, T. Barker, C. Becker, C. Hartford		
Submitted by: D. Kinney		
Explanation of Need: While it has always been standard industry practice for inspections to be performed in-person, and there are requirements for remote inspection, currently there is no language in Part 2 or RCI-1 requiring the Inspector to be present at the location of installation while performing an inspection. This requirement is implied, but not stated.		
January 2025 Meeting Action: The proposal that was passed through SG unanimously was presented to the SC. A motion was made to accept the proposal as presented. The motion was seconded and unanimously approved.		

Item Number: 23-81	NBIC Location: Part 2, 4.4.3 b)	No Attachment
General Description: Evaluate Inspector responsibilities relating to 4.4.3 FFS		
Subgroup: Inspection		
Task Group: V. Scarcella (PM), M. Horbaczewski, J. Clark, B. Ray, J. Ferreira, J. Sowinski		
Submitted by: R. Underwood		
Explanation of Need: Currently, 4.4.3-b states the Inspector shall review the condition assessment methodology and ensure the inspection data and documentation are in accordance with Section 4. This proposal would redefine the role and responsibility of the Inspector.		
January 2025 Meeting Action: Mr. Horbaczewski gave a progress report.		
TASK GROUP: PM should be M. Horbaczewski		

Item Number: 24-03	NBIC Location: Part 2, Supplement 6	No Attachment
General Description: Revise "Inspector" terminology and requirements in Supplement 6		
Subgroup: Inspection		
Task Group: B. Wilson (PM), R. Kennedy, and J. Smith		
Submitted by: R. Underwood		
Explanation of Need: Part 2 Supplement 6 should be revised to align with Part 3, Suppl 6 and the DOT. A few references are S6.4.2 a), S6.4.2 c), S6.4.4, S6.4.5, S6.4.6, and S6.4.6.1. However, this may not be an all-inclusive list.		
January 2025 Meeting Action: Progress Report. New PM was assigned during the SG meeting.		

Item Number: 24-37	NBIC Location: Part 2, 2.2.10	No Attachment
General Description: Add language in the event boiler can't be secured at the time of inspection		
Subgroup: Inspection		
Task Group: T. Bolden (PM), J. Smith, J. Peterson, W. Hackworth, T. Barker, B. Ross		
Submitted by: V. Scarcella		
Explanation of Need: In some circumstances boilers cannot be shut down and a dead man switch is not allowed.		
January 2025 Meeting Action: Mr. Bolden gave a progress report. The proposal will be sent to SG LB for review and comment.		

Item Number: 24-42	NBIC Location: Part 2, 2.4.1 and 2.4.4	No Attachment
General Description: Add language to NBIC Part 2 in regards to piping inspections		
Subgroup: Inspection		
Task Group: D. Graf (PM), K. Barkdoll, R. Kennedy, B. Wilson, J. Beauregard, W. Griffith, G. Kopp		
Submitted by: V. Scarcella		
Explanation of Need: Two fatal incidents resultant from radiator failure prompted an ask for these changes.		
January 2025 Meeting Action: Mr. Graf gave a progress report.		

Item Number: 24-62	NBIC Location: Part 2, Section 2	No Attachment
General Description: Temporary Boiler Inspection		
Subgroup: Inspection		
Task Group: P. Pollick (PM), V. Newton, B. Ross, M. Horbaczewski, J. Mangus, J. Beauregard, M. Whitlock		
Submitted by: V. Scarcella		
Explanation of Need: No guidance for inspectors for temporary boiler inspections.		
January 2025 Meeting Action: Mr. Horbaczewski gave a progress report for this item.		

13. New Items

Item Number: 24-75	NBIC Location: Part 2, Table 2.5.8	No Attachment
General Description: NBIC Part II Review table 2.5.8, suggest changes to align with NBIC Part 4		
Subgroup: Inspection		
Task Group: None assigned.		
Submitted by: V. Scarcella		
Explanation of Need: Tim Baker and Tim Bolden raised needed changes to NBIC Part II in table 2.5.8, the table needs review and alignment with the table in Part 4 3.2.6		
January 2025 Meeting Action: Progress Report. TG was created at the SG meeting.		

Item Number: 24-76	NBIC Location: Part 2, S7.9	No Attachment
General Description: Revision to Part 2, S7.9		
Subgroup: Inspection		
Task Group: None assigned.		
Submitted by: James Roberts		
Explanation of Need: Currently commercially refurbishers can inspect pressure vessels per NBIC S7.8.1 through S7.8.5 and place back into service without any statement this inspection was completed and by who.		
January 2025 Meeting Action: Progress Report. TG was created at the SG meeting.		

Item Number: 24-84	NBIC Location: Part 2, 2.3.6.10 and 2.3.6.11	No Attachment
General Description: Vessels above 10,000 psi reevaluation of remaining life		
Subgroup: Inspection		
Task Group: None assigned.		
Submitted by: Craig Bierl		
Explanation of Need: Inspectors need to be able to have a paper trail of the code integrity of these vessels. Changing the original data (in this case, designed cycle life) should ONLY be completed with the involvement of an authorized inspector and MUST be documented on a National Board form in order to be audited by the inservice inspector.		
January 2025 Meeting Action: Progress Report. TG was created at the SG meeting.		

Item Number: 24-90	NBIC Location: Part 2, S12.7 d)	No Attachment
General Description: Require means to prevent safety valve discharge piping blockage for LCDSV (Part 2)		
Subgroup: Inspection		
Task Group: None assigned.		
Submitted by: Mark Edwards		
Explanation of Need: Adding verbiage to the NBIC Part 1, Part 2 and Part 4 to require a means to prevent foreign material introduction to the safety valve discharge pipe.		
January 2025 Meeting Action:		
Progress Report. No action was taken as the SG wanted to wait until a proposal has been reviewed by PRD.		

Item Number: 24-94	NBIC Location: Part 2, 2.3.6.8	Attachment Page 6-7
General Description: Part 2, 2.3.6.8 ASME PVHO Forms call out the 2016 Edition.		
Subgroup: Inspection		
Task Group: None assigned.		
Submitted by: Luis Ponce		
Explanation of Need: It is counterproductive to limit another standard to a specific Edition because revision will be required whenever a new one is issued.		
January 2025 Meeting Action:		
The proposal that was passed unanimously through SG was presented to the SC. A motion was made to accept the proposal as presented. The motion was seconded and unanimously approved .		

Item Number: 24-100	NBIC Location: Part 2, Section 5	Attachment Page 8
General Description: Add field to NB 6 & NB 7 from JRS Team		
Subgroup: Inspection		
Task Group: None assigned.		
Submitted by: V. Scarcella		
Explanation of Need: Repeatedly came up in investigations and in discussions that after reviewing an inspection form the reader has no idea if the object was operating.		
January 2025 Meeting Action:		
The proposal that was passed unanimously through SG was presented to the SC. A motion was made to accept the proposal as presented. The motion was seconded and unanimously approved .		
TASK GROUP: During Main Committee meeting Mike Richards noted he would like to join this task group.		

Item Number: 24-104	NBIC Location: Part 2, 2.1	No Attachment
General Description: Add language clarifying the limitation of inspections presented by design.		
Subgroup: Inspection		
Task Group: None assigned.		
Submitted by: V. Scarcella		
Explanation of Need: Currently an inspector could be held responsible for conditions they could not reasonably access.		
January 2025 Meeting Action: Progress Report. TG was created at the SG meeting.		

Item Number: 24-105	NBIC Location: Part 2, 1.5.1	No Attachment
General Description: Need to restrict signatures to inspections for which the inspector was present		
Subgroup: Inspection		
Task Group: None assigned.		
Submitted by: V. Scarcella		
Explanation of Need: It has become practice in one jurisdiction for inspectors to sign inspection reports for apprentices.		
January 2025 Meeting Action: The proposal that was passed with one negative through SG was presented to the SC. After review of this proposal in the SC meeting, they chose to send the proposal out to the SC for review and comment LB.		

14. Future Meetings

- July 7-10, 2025 – Cincinnati, OH
- January 12-15, 2026 – New Orleans, LA

Mr. Horbaczewski discussed the future meetings with the SC.

15. Adjournment

A motion was made to adjourn the meeting at 11:01 am. The motion was seconded and unanimously approved.

Respectfully submitted,



Jodi Metzmaier
Subcommittee Inspection Secretary

Attendance Page 1 of 2

Subcommittee Inspection Member Attendees - January 2025

MEMBERS:	Interest Category	Email	Registered	In Person Attendance	Remote Attendance	Not In Attendance
Mark Horbaczewski Chair	Users	mhorbaczewski@diamondtechnicalservices.com	In-Person	x		
Darrell Graf Vice Chair	National Board Certificate Holders	grafdr@airproducts.com	In-Person	x		
Jodi Metzmaier Secretary	NBBI	jmetzmaier@nbbi.org	In-Person	x		
Tim Barker	Authorized Inspection Agencies	timothy.barker@fmglobal.com	In-Person	x		
Joseph Beaugard	Users	joeducati@hotmail.com	In-Person	x		
Chuck Becker	Authorized Inspection Agencies	hgbecker@yahoo.com	In-Person	x		
David Buechel	Authorized Inspection Agencies	davidbuechel55@gmail.com	In-Person		x	
Lee (Damon) Burton	National Board Certificate Holders	burtndl@airproducts.com	In-Person	x		
James Calvert	National Board Certificate Holders	jcalvert@lilly.com	Remote		x Non-voting Member	
James Clark	Manufacturers	james.clark@worthingtonindustries.com	Remote		x	
David Dexter	Users	dexterdc@dow.com	Remote		x	
William Hackworth	Authorized Inspection Agencies	william.hackworth@tuvsud.com	In-Person			x
Ken Barkdoll - Alternate for William Hackworth	ARISE District Manager	ken.barkdoll@tuvsud.com			x	
Jerry Jessick	Users	jjessick@fusion-etc.com	Remote		x	
John Mangas	General Interest	jcmangas@gmail.com		x		
Venus Newton	Authorized Inspection Agencies	venus_newton@yahoo.com	In-Person	x		
Jeffrey Petersen	Users	jeffrey.petersen@inl.gov	In-Person	x		
Pat Polick	Jurisdictional Authorities	patrick.polick@illinois.gov	In-Person	x		
Brent Ray	Users	bdray@marathonpetroleum.com	In-Person	x		
James Roberts	Manufacturers	james.roberts@triarcorp.com	In-Person	x		
David Rose	Users	dr3747@telus.net	Remote			x
Jason Safarz	General Interest	jsafarz@karldungsusa.com				x
Vincent Scarella	Authorized Inspection Agencies	vincent.scarcella@cna.com	In-Person	x		
Thomas Vandini	National Board Certificate Holders	tvandini@propanetank.com	In-Person	x		
Mike (Gerald) Whitlock	Authorized Inspection Agencies	gerald_whitlock@hsb.com	In-Person	x		

Attendance Page 2 of 2

Subcommittee Inspection Visitor Attendees - January 2025

VISITORS:	Company/Title/Interest	Email	Registered	In Person Attendance	Remote Attendance
Tim Bolden	CNA	timothy.bolden@cna.com	In-Person	X	
Randy Kennedy	Babcock & Wilcox - Quality Manager	crkennedy@babcock.com	In-Person	X	
Steven Brantigan	NY State Department of Labor Chief Boiler Inspector	steven.brantigan@labor.ny.gov	Remote		X
Ken Barkdoll	ARISE District Manager	ken.barkdoll@tuvsud.com	Remote		X
James Hadley	Fact Fancy, LLC	james.hadley@factplusfancy.com	Remote		X
Daniel Fulford	Battelle Energy Alliance, LLC Quality Engineer	Daniel.fulford@inl.gov	In-Person	X	
Wil Griffith	Zurich - RE Manager	william.griffith@zurichna.com	In-Person	X	
John King	Chubb Insurance QC Program Manager	johnking@chubb.com	In-Person	X	
Gavin Kopp	Arizona Boiler Inspectors - Inspector	gavin@stateboilerinspectors.com	Remote		X
Thomas Maher	City of Chicago Chief Boiler Inspector	thomas.maher@cityofchicago.org	Remote		X
Clay Moultrie	Quality Directory/Quality Steel Corp	cmoultrie@propanetank.com	In-Person	X	
William Ross	Commonwealth of PA Chief Inspector	wross@pa.gov	In-Person	X	
James Sowinski	The Equity Engineering Group, Inc. Principal Engineer	jsowinski@e2g.com	In-Person	X	
Brandon Steinhart	FM Global - Operations Chief Inspector	brandon.steinhart@fmglobal.com	In-Person	X	
Rich Wallace					X
NBBI STAFF					
Christa Rogers	NBBI	crogers@nbbi.org	In-Person	X	
Joel Amato	NBBI	jamato@nbbi.org	In-Person	X	
Gred Goossens	NBBI	ggoossens@nbbi.org	In-Person	X	
Mark Mooney	NBBI	mmooney@nbbi.org	In-Person	X	

- MS Teams Notes:
 - Please stay muted during the meeting. If you would like to speak, please use the “raise hand” feature, and then you can unmute as you are called on. Teams will note the order in which your hands were raised, and we will call on you in that order.
 - Any messages sent through chat **will be displayed for anyone in the meeting to see**. If you need to send me a private message, please send it to me directly and not through the meeting chat.
 - If you are calling in with a phone number, please change your name from your phone number to your actual name.

- This meeting marks the end of Cycle A for the 2027 NBIC edition.

- The National Board will be hosting a reception on Wednesday 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.

- There is a tutorial for submitting NBIC requests on the NBIC tab of the Business Center. The link is under the NBIC Requests section. If there are any other tutorials you think would be helpful, please let us know and we can do our best to add more.

- If you’d like to open a new Interpretation or Action Item, this should be done through the National Board Business Center.
 - Anyone, member or not, can open a new item.

- 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**.
 - 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.

- All proposals should be submitted in word with “strike through/underline” tracking.
 - Please contact me (jmetzmaier@nbbi.org) if you need any help with this.
 - Project Managers: please ensure any proposals containing text from the 2021 NBIC are updated to contain text from the 2023 NBIC.

- As a reminder, anyone who would like to become a member of a group or committee:
 - Should attend at least 2 meetings prior to being put on the agenda for membership consideration. The nominee will be on the agenda for vote during their 3rd meeting, and they would become a voting member during their 4th meeting.
 - The nominee must submit the formal request along with their resume to the NBIC Secretary, Jonathan Ellis, **PRIOR TO** the meeting. nbicsecretary@nbbi.org
 - If needed, we can also create a ballot for voting of 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, the room set up, etc. Please continue to use the online registration for each meeting, whether you are attending in person or remote. It also is a good way to make sure we have the most up-to-date contact information.

PART 2, SUPPLEMENT 15

Concerns Regarding Carbon Monoxide During Boiler Inspections

S15.1 SCOPE

- a) This supplement provides guidelines for evaluating potential carbon monoxide concerns.
- b) It is well documented and internationally recognized that carbon monoxide is a serious health concern. Annually, there are over 40,000 cases of CO poisoning in North America². Boiler and fired pressure vessel inspections involve equipment that is an exposure to the inspector and occupants of buildings. National Board Inspection Code Part 1 calls for carbon monoxide detectors (NBIC Part 1, 1.6.9) where required. A review of service and maintenance records (NBIC Part 2, 2.2.11), verification that combustion air is supplied to the boiler room (NBIC Part 2, 2.2.20.6 c and NBIC Part 1, 1.6.6) and inspecting for combustion air leaks (NBIC Part 2, 2.2.5 d) are important parts of the inspection that help prevent carbon monoxide from becoming a problem. Installers must follow manufacturers and the jurisdictions requirements for the installation of the equipment.

S15.2 Inspection points that should be included in the inspection of the object

- a) Assessment of conditions that may indicate a carbon monoxide condition exists outside of the combustion chamber include but is not limited to the following:
- unstable pilot or main flame
 - Yellow flame
 - Smoke from stack
 - Discoloration around burner or casing
 - The presence of soot on any surface
 - Any flue leakage or blockage
 - Fresh air intake blocked.
 - Negative pressure in boiler room, resistance when you go to open door, air rushes in when you open door.
 - Lack of maintenance on burner/boiler
 - Condensation in boiler room
 - Any changes to the combustion load or reconfigurations that may impact combustion should be considered in the inspection.
- a)b) If leakage of flue gas or in any case a condition indicates a lack of combustion air, the owner or user shall engage a qualified person to investigate and make corrections.

S15.3 Equipment recommended to inspect the objects safely.

- a) It is highly recommended that inspectors carry a carbon monoxide detector. They are inexpensive and easy to use.

Note 1 <https://www.who.int/teams/environment-climate-change-and-health/air-quality-and-health/health-impacts/types-of-pollutants>,

Note 2 <https://www.ncbi.nlm.nih.gov/books/NBK430740/>

Item Number: 23-27

NBIC Location: Part 2, 1.1

Page 1 of 1

General Description: Addition of requirement for Inspector to be present for inspections.

Task Group: V. Newton (PM), V. Scarcella, T. Bolden, J. Morgan, J. Smith, T. Barker, C. Becker, C. Hartford

Submitted by: D. Kinney

Explanation of Need: While it has always been standard industry practice for inspections to be performed in-person, and there are requirements for remote inspection, currently there is no language in Part 2 or RCI-1 requiring the Inspector to be present at the location of installation while performing an inspection. This requirement is implied, but not stated.

PROPOSAL:

Definition:

Remote Visual Inspection — The examination of a PRI via a camera affixed to a mobile platform not operated by the Inspector, where the Inspector does not have direct line of sight with the area being examined, while the Inspector is on site.

1.1 SCOPE

This section provides general requirements and guidelines for conducting inservice inspection of pressure-retaining items and includes precautions for the safety of inspection personnel. The safety of the public and the Inspector is the most important aspect of any inspection activity. In-service inspections shall be conducted on location and in person by the inspector, unless expressly allowed by the Jurisdiction.

NBIC Action Item A24-94
 Submitted by Luis Ponce (lponce@nbbi.org)
 Submitted on: October 16, 2024
 Page 1 of 2



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

Subject:	Part 2, 2.3.6.8 ASME PVHO Forms call out the 2016 Edition.
NBIC Location:	Part 2, 2.3.6.8 e) & 2.3.6.8 g)
Statement of Need:	It is counterproductive to limit another standard to a specific Edition because revision will be required whenever a new one is issued.
Background Information:	An Inservice student at the National Board asked the question, "Why is the NBIC limiting the ASME PVHO standard in the affected paragraphs to the 2016 Edition when Part 2, 1.3 g) does not?" The forms available should reflect the year the PVHO was manufactured, not necessarily the latest version of the form.

Note: an alternate option from my below proposed change would be to insert a statement directing the reader to look for the form corresponding to the year of manufacture.

Proposed Text:

- e) Inspection of view ports / windows
- 1) Each window should be individually identified and be marked in accordance with ASME PVHO-1.
 - 2) If there are any penetrations through windows, they must be circular in accordance with ASME PVHO-1 requirements.-
 - 3) Windows must be free of crazing, cracks and scratches that exceed "superficial" defects as defined by ASME PVHO-2.
 - 4) Windows and viewports have a maximum interval for seat/seal inspection and refurbishment. Documentation should be checked to ensure compliance with ASME PVHO-2, Section 2-4.4.
 - 5) Windows have a maximum service life ranging from 10 to 20 years depending on the type of window and service conditions.
 - 6) Documentation should be checked to ensure compliance with ASME PVHO-2 inspection and refurbishment requirements (ASME PVHO-2-~~2016~~, Tables 2-4.3-1 and 2-4.3-2) and service life limitations (ASME PVHO-2-~~2016~~, Section 2-4.4).
- g) Acceptance criteria
 The following forms are required to be available for review:

NBIC Action Item A24-94

Submitted by Luis Ponce (lponce@nbbi.org)

Submitted on: October 16, 2024

Page 2 of 2

- 1) ASME BPV Forms U-1, U-1A or U-2 as appropriate for vessels built to ASME B&PV Code Section VIII. For vessels built to other rule sets, the equivalent forms shall be available;
- 2) ASME PVHO-1 ~~2016~~ Form GR-1 Manufacturer's Data Report for Pressure Vessels for Human Occupancy;
- 3) ASME PVHO-1 ~~2016~~ Form VP-1 Fabrication Certification for Acrylic Windows (one for each window);
- 4) ASME PVHO-1 ~~2016~~ Form VP-2 Design Certification for Acrylic Windows (one for each window);
- 5) ASME PVHO-2 ~~2016~~ Form VM-1 Viewport Inspection (one for each window, current within ASME PVHO-2 inspection interval requirements); and
- 6) For any repaired windows, ASME PVHO-2 ~~2016~~ Form VM-2 Acrylic Window Repair Certificate for Windows. Repaired by the User (or his Authorized Agent) or ASME PVHO-2 ~~2016~~ Form VM-3 Acrylic Window Repair Certificate for Severely Damaged Windows.

NBIC Action Item 24-100
 Submitted by V. Scarcella
 Submitted on 10/30/2024
 Page 1 of 1



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

Subject:	Add field to NB 6 & NB 7 from JRS Team
NBIC Location:	Part 2, Section 5
Statement of Need:	repeatedly came up in investigations and in discussions that after reviewing an inspection form the reader has no idea if the object was operating.
Background Information:	

Proposed Text:

NB-6:

In item 7, change “Was Boiler Fired?” to “Is Boiler in Operation?”

NB-7:

Update Unit Size field to Cubic Centimeters and Cubic feet.

ADD WORDING TO THE BOTTOM OF BOTH FORMS:

The owner user is responsible for the proper operation, care and maintenance of all jurisdictional objects and compliance with all applicable codes and regulations. The inspection is a point in time inspections and conditions can change often and suddenly. By signing this certificate, neither the undersigned nor my employer makes any warranty, expressed or implied, concerning the work described in this report. Furthermore, neither the undersigned nor my employer shall be liable in any manner for any personal injury, property damage, or loss of any kind arising from or connected with this document review.