



THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS

NATIONAL BOARD INSPECTION CODE SUBCOMMITTEE INSTALLATION

MINUTES

Meeting of January 10, 2024
San Antonio, TX

These minutes are subject to approval and are for 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
FAX: (614) 847-1828

1. Call to Order

Chair Mr. Don Patten called the meeting to order at 8:03 a.m. Central Time.

2. Introduction of Members and Visitors

Mr. Patten held roll call. Each member and visitor (in person and remote) introduced themselves with their name and company. All attendees are listed on **Attachment Page 1**. Mr. Jeff Kleiss (Manufacturers; Lochinvar) sat as an alternate for Ms. Melissa Wadkinson.

3. Check for a Quorum

With 10 out of 12 members present, in person and remote, a quorum was reached.

4. Awards/Special Recognition

There were no awards or special recognitions given at this meeting.

5. Announcements

Ms. Vance gave the announcements. See **Attachment Pages 2-3**.

6. Adoption of the Agenda

A motion was made to adopt the agenda as presented. The motion was seconded and unanimously accepted.

7. Approval of the Minutes of the July 12, 2023, Meeting

A motion was made to approve the minutes of the July 12, 2023, meeting. The motion was seconded and unanimously accepted.

8. Review of Rosters

a. Membership Nominations

Mr. Kim Black is interested in becoming a member of **Subgroup and Subcommittee Installation**, representing Manufacturers.

Mr. Robert Smith is interested in becoming a member of **Subgroup and Subcommittee Installation**, representing General Interest.

After both gentlemen left the room, the committee determined that their addition to the subcommittee would not present an over-representation of either interest category. They briefly discussed the timeline of membership from subgroup to subcommittee and determined that any staggering of membership from subgroup to subcommittee with other members in previous years may have been due to interest category issues. A motion was made to approve Mr. Black and Mr. Smith as members of the subgroup and to recommend their membership on the subcommittee. The motion was seconded and unanimously accepted.

b. Membership Reappointments

The following **Subcommittee Installation** memberships are set to expire prior to the July 2024 meeting: Mr. Todd Creacy.

Mr. Creacy stated his interest in continuing to serve and participate as a member of the committee.

c. Officer Appointments

There were no officer appointments in this meeting.

9. Open PRD Items Related to Installation

- NB15-0305 – Create Guidelines for Installation of Overpressure Protection by System Design – D. Marek (PM)
- NB15-0315 – Review isolation valve requirements in Part 1, 4.5.6 and 5.3.6 – D. DeMichael (PM)
- 19-83 – Address Alternate Pressure Relief Valve Mounting Permitted by ASME CC2887-1 – D. Marek (PM).
- 22-08 – Review and improve guidance for T&P valve installation relating to probe.
- 22-16 – Allow the use of pressure relief valves on potable water heaters.
 - This passed through letter ballot and is up for Main Committee vote.

10. Interpretations

There were no Part 1 interpretation requests to address.

11. Action Items

Item Number: 20-62	NBIC Location: Part 1, 1.4.5.1	Attachment Pages 4-8
General Description: Update the National Board Boiler Installation Report		
Subgroup: SG Installation		
Task Group: T. Clark (PM), E. Wiggins, R. Spiker, T. Creacy, and D. Patten.		
Explanation of Need: The form has not been updated in years. The form will be part of the National Board’s Jurisdictional Reporting System (JRS) which is currently under development.		
January 2024 Meeting Action: Proposal		
There was a brief discussion on the use of this report among jurisdictions. As more states adopt it, it will become available to manufacturers, installers, etc. The content of the report is ready, but it will be formatted by National Board staff. A motion was made to accept the proposal as presented. The motion was seconded and approved with one abstention (Mr. Spiker, who stated, “My vote to abstain from voting yes or no is I want to see the I-1 and the instructions complete as it will be in the NBIC Part 1 in page format”).		

Item Number: 20-86	NBIC Location: Part 1, 2.10.1 a)	No Attachment
General Description: Testing and Acceptance: Boil-out Procedure		
Subgroup: SG Installation		
Task Group: E. Wiggins (PM), D. Patten, S. Konopacki, and R. Spiker		
Explanation of Need: This was brought to my (Mr. Eddie Wiggins) attention by Ernest Brantley. Mr. Brantley indicated during an acceptance inspection, he found boiler with excessive oil on the tubes and tube sheet after boiler was delivered and installed. He could not find any reference to boil-out to remove this extraneous material.		
January 2024 Meeting Action: Progress Report		
After reviewing the two subgroup objections to the proposal, the committee discussed adding this as a guide or supplement instead. Mr. Scribner spoke briefly on the purpose of supplements being to address requirements of specific pressure-retaining items, and as such, are still considered part of the Code. The committee decided to add this as a supplement with references to it added throughout Part 1 where necessary. After that, it is slated to be letter balloted to the subgroup (Mr. Patten to follow up).		

Item Number: 22-28	NBIC Location: Part 1	No Attachment
General Description: Pool Heater definition		
Subgroup: SG Installation		
Task Group: J. Kleiss (PM), R. Spiker, T. Creacy, and M. Byrum		
Explanation of Need: The NBIC Installation and Inspection Codes do not have a definition for pool heaters. There is potential for confusion regarding which NBIC requirements, if any, should apply to pool heaters.		
January 2024 Meeting Action: Progress Report		
Mr. Kleiss briefly reviewed the conversation from the subgroup meeting. This will be sent as a letter ballot to the subgroup.		

Item Number: 22-32	NBIC Location: Part 1, 3.8.1.4 b)	No Attachment
General Description: High pressure limit control requirements for fired jacketed steam kettles		
Subgroup: SG Installation		
Task Group: R. Adams (PM), D. Patten, T. Clark, and T. Creacy.		
Explanation of Need: As a safeguard to over pressurizing the fired jacketed steam kettle, the pressure range of the actuated high pressure limit control should not exceed the MAWP of the vessel.		
January 2024 Meeting Action: Progress Report		
Mr. Adams explained how the proposal was consolidated to be added as a one-page supplement. Most verbiage mirrors ASME Section VIII, Mandatory Appendix 19 (with the non-applicable information removed). Section 4, item g) contains specific verbiage that addresses the original inquiry that opened this item. Mr. Adams will add conversion factors and the definition of a jacketed kettle (definition to be added to scope). Then it will be sent as a letter ballot to Part 1 and Part 4 subgroups (Part 4 needs to review SXX.5 on Pressure Relief Valves).		

Item Number: 23-52	NBIC Location: Part 1, 2.5.3.2 and 3.5.3	No Attachment
General Description: Harmonize electrical requirements for all types of boilers/water heaters		
Subgroup: SG Installation		
Task Group: T. Clark (PM), S. Konopacki, J. Kleiss, R. Spiker, and Jon Choitz		
Explanation of Need: Electrical requirements for power boilers, heating boilers, and water heaters are inconsistent, particularly regarding remote emergency shutdown switches. In some cases, the requirements are the same, but worded or ordered differently. In order to promote better understanding of code requirements and consistency in their application, I propose making sections 2.5.3 and 3.5.5 as uniform as possible.		
January 2024 Meeting Action: Progress Report		
Mr. Clark reviewed the history of this item and how he reorganized the proposal: first, by location of switch/breaker, with guidance based on where the door is installed and the type of boiler/equipment with specific switch requirements for each type of equipment.		
The task group will create a new proposal showing exactly what verbiage is being proposed to be removed or moved and a clean version highlighting new text. The revised proposal will be sent as a letter ballot to the subgroup, and if it passes, for Review and Comment to the subcommittee.		

12. New Items:

Item Number: 23-67	NBIC Location: Part 1, 4.2.2	No Attachment
General Description: Pressure Gage Scale Requirements		
Subgroup: SG Installation		
Task Group: M. Byrum (PM), R. Spiker, Jon Choitz		
Explanation of Need: Update pressure gage requirements to reflect industry practice and common ranges. Also, to allow for the use of gage overpressure protectors, which the current wording does not. For systems with an MAWP that greatly exceeds normal operating pressure, it is sometimes necessary to use a gage with a lower scale so that the gauge reads in the middle third of its scale during normal operation. In such a situation, a gage overpressure protector is installed upstream of the gage.		
January 2024 Meeting Action: Close with no Action		
Mr. Patten presented a document featuring a new over pressure protector product that the proposal was describing.		
The committee reviewed the proposal and determined again that the existing verbiage already meets the requirements for which the change was proposed. Furthermore, by implementing an optional design/engineering item (item c), the committee felt they were acting outside their scope. A motion was made to close this item with no action. The motion was seconded and unanimously accepted.		

13. Mr. Ponce gave a presentation addressing Business Center functions, specifically how to submit a request for a Code change or addition and how to submit an inquiry. He also spoke about the new standing task group for NBIC Interpretations, stating we need at least two members from each part to participate on this task group.

14. Future Meetings

Mr. Patten announced the future NBIC meeting locations and dates.

- July 15-18, 2024 – The Brown Hotel in Louisville, KY
- January 2025 – TBD

15. Adjournment

Mr. Patten motioned to adjourn the meeting at 10:15 a.m. Central Time. The motion was seconded and unanimously accepted.

Respectfully submitted,



Michelle Vance
Subcommittee Installation Secretary

Subcommittee Installation Attendance: January 10, 2024

MEMBERS:	Interest Category	In Person	Remote	Not In Attendance
Don Patten	NB Certificate Holders	X		
Stan Konopacki	Users	X		
Joe Brockman	Authorized Inspection Agencies	X		
Marvin Byrum	Authorized Inspection Agencies	X		
Tom Clark	Jurisdictional Authorities	X		
Todd Creacy	Authorized Inspection Agencies	X		
J. Matt Downs	Manufacturers	X		
Pat Jennings	Authorized Inspection Agencies			X
H. Michael Richards	General Interest			X
Ron Spiker	Jurisdictional Authorities	X		
Jeff Kleiss (alternate for Melissa Wadkinson)	Manufacturers	X		
Eddie Wiggins	Jurisdictional Authorities		X	
Michelle Vance	Secretary	X		

VISITORS:	Company / Interest	In Person	Remote
Adrian Gibbs	City of Milwaukee		X
Bryan Ahee	Bradford White Corporation		X
Gary Scribner	NBBI Staff	X	
Jon Choitz	HSB	X	
Luis Ponce	NBBI Staff	X	
Nancy Chiasson	Province of Prince Edward Island		X
Robert Kim Black	ABMA	X	
Robert Smith	US Naval Facilities Engineering Systems Command	X	
Robert Stimson	State of Kansas		X
Rodger Adams	Zurich	X	
Roger Boillard	State of Indiana		X

Announcements

- Microsoft 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.
- This meeting marks the end of Cycle C for the 2025 NBIC edition. The committees will have until the end of the July 2024 NBIC meeting to approve items for inclusion in the 2025 NBIC. Anything going to letter ballot should be completed this meeting.
- The National Board will be hosting a reception on Wednesday evening from 5:30 p.m. to 7:30 p.m. in Veramendi (fourth level of the hotel).
- The National Board will be hosting breakfast and lunch on Thursday in Veramendi (fourth level of the hotel) for those attending the Main Committee meeting. Breakfast will be served from 7:00 a.m. to 8:00 a.m. and lunch will be served 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.
- The NBIC Share Cloud (nbfileshare.org) is for committee members only. Remember to add any attachments that you’d like to show during the meeting (proposals, reference documents, power points, etc.) to the cloud **prior to the meeting**.
 - If needed, we can go over this process.
 - All power point attachments/presentations must be sent to the NBIC Secretary Jonathan Ellis for approval (nbicsecretary@nbbi.org) **prior to the meeting**.
 - Contact Jonathan Ellis for any questions regarding NBIC file share access.
- All proposals should be submitted in Word (if possible) with “strike through/underline” tracking.
 - Please contact me (mvance@nbbi.org) if you need any help with this.
 - Project Managers: please ensure any proposals containing text from prior NBIC editions are updated to contain text from the 2023 NBIC.
 - The NBIC Style Guide was recently updated. Committee members should familiarize themselves with this as they propose revisions and additions to the NBIC. It is uploaded to the Cloud and Business Center (under the **NBIC tab → Committee Documents**).
- If you’d like to request a new Interpretation or Action Item, you should do so through the National Board Business Center.
 - Anyone, member or not, can open a new item.
 - We can go over this if necessary. You may also refer to the tutorial on this (under the NBIC tab on the Business Center).
- 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 vote during their third meeting, and they would become a voting member during their fourth meeting.
 - The nominee must submit the formal request along with their resume to Jonathan Ellis (nbicsecretary@nbbi.org), **prior to the meeting**.

Announcements

- If needed, we can also create a ballot for voting on a new member between meetings. To do this, you will need to contact Mr. Ellis.

- 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 also helps to ensure we have the most up-to-date contact information on file. Please continue to use the online registration for each meeting, whether you are attending in person or remotely.

If you did not register, please do so now so we have an accurate count for the reception tonight and breakfast and lunch on Thursday.

- If possible, try to utilize time between meetings to work in your task groups. If needed, you may use Part 1's Microsoft Teams links to work in your task groups.

1: OWNER/FINANCIALLY RESPONSIBLE PARTY INFORMATION

OWNER NAME 1) a)	JURISDICTIONALLY ASSIGNED OWNER NUMBER 1) b)		
OWNER ADDRESS (STREET, PO BOX, RR) 1) c)	CITY 1) c)	STATE 1) c)	ZIP CODE 1) c)
OWNER CONTACT NAME 1) d)	PHONE 1) d)	E-MAIL 1) d)	

2: SITE INFORMATION

SITE NAME 2) a)	JURISDICTIONALLY ASSIGNED SITE NUMBER 2) b)		
SITE ADDRESS (STREET) 2) c)	CITY 2) c)	STATE 2) c)	ZIP CODE 2) c)
SITE CONTACT NAME 2) d)	PHONE 2) d)	E-MAIL 2) d)	
SITE BUSINESS TYPE/NATURE 2) e)	PLACE OF PUBLIC ASSEMBLY? 2) f)		

3: INSTALLATION INFORMATION

INSTALLER NAME 3) a)	INSTALLER LICENSE NUMBER 3) b)	PERMIT NUMBER 3) c)
INSTALLER CONTACT NAME 3) d)	PHONE 3) d)	E-MAIL 3) d)
INSTALLATION CONDITION (New / Used / Temporary) 3) e)	REPLACEMENT IN KIND? 3) f)	

4: EQUIPMENT INFORMATION

EQUIPMENT NAME (owner/user supplied designator) 4) a)	EQUIPMENT LOCATION ON SITE 4) b)	EQUIPMENT TYPE 4) c)	JURISDICTIONALLY ASSIGNED NUMBER 4) d)
CAST SECTIONS 4) e)	NUMBER OF MODULES 4) f)	SERVICE / USE 4) g)	

5: CODE INFORMATION

MANUFACTURER 5) a)	DATE OF MANUFACTURE 5) b)	NB NUMBER 5) c)	SERIAL NUMBER 5) d)	ASME DESIGNATOR: A S U H L W M E H 5) e) Other:
MAWP (psi) 5) f)	MAX. TEMPERATURE 5) g)	MANUFACTURER'S DATA REPORT ATTACHED? 5) h)	ADDITIONAL NB OR SERIAL NUMBERS 5) i)	

6: FIRING INFORMATION

FIRED / UNFIRED 6) a)	METHOD OF FIRING 6) b)	FUEL TYPE 6) c)	FUEL TRAIN TYPE 6) d)	HEAT INPUT 6) e)	HEATING SURFACE 6) f)
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7: PHYSICAL CONSTRUCTION AND CLEARANCES

DIAMETER 7) a)	LENGTH 7) a)	VOLUME 7) a)	INSPECTION OPENINGS? 7) b)	ADEQUATE COMBUSTION AIR? Unobstructed Opening [sq. In.]: 7) c) Power Ventilator Fan [C F M]:
CLEARANCES: 7) d)	LEFT 7) d)	RIGHT 7) d)	FRONT 7) d)	BACK 7) d)
TOP 7) d)				

8: CONTROLS AND SAFETY DEVICES

NUMBER OF PRDs 8) a)	PRD TYPE 8) b)	PRD SYMBOL STAMP 8) c)	PRD SETPOINT(S) 8) d)	MINIMUM REQUIRED RELIEVING CAPACITY 8) e)	TOTAL STAMPED RELIEVING CAPACITY 8) f)
PRIMARY LWCO TYPE? 8) a)	SECONDARY LWCO TYPE? 8) b)	HIGH PRESSURE LIMIT PROVIDED? 8) i)	HIGH PRESSURE LIMIT W/ MANUAL RESET PROVIDED? 8) j)	HIGH TEMPERATURE LIMIT PROVIDED? 8) k)	HIGH TEMPERATURE LIMIT W/ MANUAL RESET PROVIDED? 8) l)
ELECTRICAL: IS A DISCONNECTING MEANS PROVIDED? 8) a)		IS A REMOTE EMERGENCY SHUTOFF SWITCH PROVIDED? 8) o)		IS A CARBON MONOXIDE DETECTOR / ALARM PROVIDED? 8) p)	
THERMOMETER PROVIDED? 8) m)					

9: INSPECTION INFORMATION

TYPE OF INSPECTION 9) a)	PRESSURE TEST PERFORMED? 9) b)	PRESSURE TEST MEDIUM 9) c)	TEST PRESSURE 9) d)	TEST TEMPERATURE 9) e)	HOLD TIME 9) f)
OTHER CODE REQUIREMENTS VERIFIED? 9) g)		SATISFACTORY? 9) h)	CORRECTIONS REQUIRED? 9) i)		
INSPECTION DATE 9) j)	INSPECTION TIME 9) k)				

10: COMMENTS

10) a)

11: SUBMISSION INFORMATION

NAME OF PERSON SUBMITTING FORM 11) a)	TITLE 11) b)	EMPLOYER 11) c)
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PHONE NUMBER 11) d)	EMAIL 11) d)	COMMISSION OR LICENSE NUMBER 11)	DATE OF SUBMISSION 11) f)
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1.4.5.1.1

- 1) Owner/Financially Responsible Party Information
 - a. Business name of the owner or financially responsible party.
 - b. Jurisdictionally assigned number for the owner (if applicable).
 - c. Owner's mailing address.
 - d. Contact information for the owner.
- 2) Site Information
 - a. Business name or identifier site where the equipment is installed.
 - b. Jurisdictionally assigned number for the site (if applicable).
 - c. Physical address of the site.
 - d. Contact information for the site.
 - e. The nature of business conducted at the site.
 - f. Does the location constitute a place of public assembly (yes/no)?
- 3) Installation Information
 - a. Business name of the organization who performed the installation.
 - b. Installer license number (if applicable).
 - c. Installation permit number (if applicable).
 - d. Contact information for the installer.
 - e. Condition the equipment was installed in (new/used/temporary).
 - f. Is the new equipment a replacement for an existing unit?
- 4) Equipment Information
 - a. Name or designator for equipment (e.g. "Boiler 3B" or "Shop Air Compressor).
 - b. Physical location of the equipment within the site (e.g. "Basement Mech Room").
 - c. Equipment type (e.g. "fired boiler" or "cold isostatic press").
 - d. Jurisdictionally assigned number for the equipment (if applicable).
 - e. Number of sections if the equipment is a cast boiler (# or N/A). Note, note all cast boilers are sectional. Mono-block cast boilers should be described as having one section.
 - f. Number of modules if the equipment is a modular boiler or water heater (# or N/A).
 - g. Service the equipment is used for (e.g. hot-water heating, storage, or process).
- 5) Code Information
 - a. Manufacturer as stamped on the code plate.
 - b. Date of manufacture as stamped on the code plate.
 - c. National Board number, if applicable.
 - d. Serial number, if applicable.
 - e. ASME code stamp, if applicable.
 - f. Maximum allowable working pressure as stamped on the code plate.
 - g. Maximum allowable temperature (if applicable).
 - h. Will a manufacturer's data report be submitted with the I-1 Report (yes/no)?
 - i. Additional National Board or serial numbers for modular type equipment.
- 6) Firing Information
 - a. Is the equipment fired or unfired?

- b. How is the equipment fired (automatic, hand, stoker, N/A, etc.)?
 - c. The fuel/energy source for the equipment (e.g. natural gas, solid fuel, electricity, N/A, etc.).
 - d. What code does the fuel train comply with (e.g. CSD-1, NFPA 85, N/A, etc.)?
 - e. The heat input of the equipment in BTU/hr (if applicable).
 - f. Heating surface of the equipment in square feet (if applicable).
- 7) Physical Construction and Clearances
- a. Diameter, length, and volume of the equipment (if appropriate).
 - b. Type of inspection openings provided (e.g. handhole, manhole, none).
 - c. Document the combustion air provided (if applicable).
 - d. Clearances from the equipment to walls or structures in the indicated directions.
- 8) Controls and Safety Devices
- a. Number of pressure relief devices provided for the equipment.
 - b. The type of pressure relief device(s) provided.
 - c. The ASME code symbol stamp on the provided pressure relief device (if applicable).
 - d. Minimum required relieving capacity of the equipment.
 - e. Set point(s) of pressure relieving device(s) provided.
 - f. Total relieving capacity provided.
 - g. Type of primary low-water cutoff device (e.g. float, probe, flow switch, etc.).
 - h. Type of secondary low-water cutoff device (e.g. float, probe, etc.).
 - i. Is a high-pressure limit switch provided (if applicable)?
 - j. Is a high-pressure limit switch with manual reset provided (if applicable)?
 - k. Is a high-temperature limit switch provided (if applicable)?
 - l. Is a high-temperature limit switch with manual reset provided (if applicable)?
 - m. Is a thermometer installed (if applicable)?
 - n. Is a means of disconnecting electrical power provided (if applicable)?
 - o. Is a remote emergency shutoff switch provided (if applicable)?
 - p. Is a carbon monoxide detector or alarm installed in the equipment room?
- 9) Inspection Information
- a. What type of inspection was performed (internal or external)?
 - b. Was a pressure test performed?
 - c. If a pressure test was performed, what was the test medium?
 - d. If a pressure test was performed, what was the test pressure?
 - e. If a pressure test was performed, what was the test temperature?
 - f. If a pressure test was performed, what was the hold time?
 - g. Have all other code requirements been met?
 - h. Was the installation found satisfactory?
 - i. Are any corrections required?
 - j. What was the date of inspection?
 - k. How long did the inspection take?
- 10) Comments
- a. Comments deemed necessary by the person submitting the form.
- 11) Submission Information
- a. Name of the person filling out and submitting the form.

- b. Title of the person submitting the form.
- c. The business name of the submitter's employer.
- d. Contact information for the submitter.
- e. Commission or license number of the submitter.
- f. Date of submission.