



THE NATIONAL BOARD  
OF BOILER AND PRESSURE VESSEL INSPECTORS

# NATIONAL BOARD INSPECTION CODE SUBGROUP INSTALLATION

## MINUTES

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Meeting of January 9, 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  
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## **1. Call to Order**

Chair Mr. Joe Brockman called the meeting to order at 8:01 a.m. Central Time.

## **2. Introduction of Members and Visitors**

Mr. Brockman held roll call. Each member and visitor (in person and remote) introduced themselves with their name and company. All attendees are listed on **Attachment Pages 1-2**.

## **3. Check for a Quorum**

With 13 out of 14 members present, in person and remote, a quorum was reached.

## **4. Awards/Special Recognition**

Mr. Brockman recognized Mr. Eddie Wiggins' 10 years as a member of Installation. He will be mailed a pin recognizing his service.

## **5. Announcements**

Mr. Brockman gave the announcements. See **Attachment Pages 3-4**.

## **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 11, 2023, Meeting**

A motion was made to approve the minutes of the July 11, 2023, meeting. The motion was seconded and unanimously accepted.

- 8.** Chief John Burpee and Chief Rob Troutt presented on behalf of the National Board and NBIC Committee on the need for increased communication between Chiefs and NBIC members. The National Board is taking steps to increase engagement and communication between Chiefs and NBIC members. The NBIC Committee Chair and Vice Chair are being asked to participate in the annual October Chiefs' meeting. The Chiefs are being asked to participate in NBIC committee meetings.

NBIC Committee Chair Mr. George Galanes and Vice Chair Ms. Melissa Wadkinson spoke further on the benefits of this increased communication, as well as developing an awareness that when an individual states an opinion, that opinion is not necessarily the opinion of the organization or body of people they are representing. Mr. Gary Scribner highlighted that our meetings (both NBIC and Chiefs meetings) are hybrid, allowing increased participation and communication. He added that organizations around the world are using the NBIC. We now have Part 1 of the 2021 NBIC translated into Spanish, and in the next couple years, we are hoping to have the Spanish translation of Parts 2-4 published.

## **9. Review of Rosters**

### **a. Membership Nominations**

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

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

Both gentlemen discussed their background and their interest in joining the committee. Then they left the room so the committee could discuss. It was noted that both gentlemen have already been active on the committee and that their levels of expertise were needed. A motion was made to recommend both Mr. Black and Mr. Smith as members of the subgroup. The motion was seconded and unanimously accepted.

### **b. Membership Reappointments**

There were no membership reappointments in this meeting.

**c. Officer Appointments**

There were no officer appointments in this meeting.

**10. Open PRD Items Related to Installation**

- NB15-0305 – Create Guidelines for Installation of Overpressure Protection by System Design – D. Marek (PM).
  - Mr. Brockman briefly reported on this item: There is some verbiage on this in ASME Section VIII that the task group is reviewing. This item may be outside of the NBIC Committee’s scope of requirements.
- 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.

**11. Interpretations**

There were no Part 1 interpretation requests to address.

**12. Action Items**

Item Number: 20-62	NBIC Location: Part 1, 1.4.5.1	Attachment Pages 5-9
<p><b>General Description:</b> Update the National Board Boiler Installation Report</p> <p><b>Subgroup:</b> SG Installation</p> <p><b>Task Group:</b> T. Clark (PM), E. Wiggins, R. Spiker, T. Creacy, and D. Patten.</p> <p><b>Explanation of Need:</b> 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.</p>		
<p><b>January 2024 Meeting Action: Proposal</b></p> <p>Mr. Clark showed the report side by side with the instructions. 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”).</p>		

<b>Item Number: 20-86</b>	<b>NBIC Location: Part 1, 2.10.1 a)</b>	<b>Attachment Page 10</b>
<p><b>General Description:</b> Testing and Acceptance: Boil-out Procedure</p> <p><b>Subgroup:</b> SG Installation</p> <p><b>Task Group:</b> E. Wiggins (PM), D. Patten, S. Konopacki, and R. Spiker</p> <p><b>Explanation of Need:</b> 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.</p>		
<p><b>January 2024 Meeting Action: Proposal</b></p> <p>The committee revised the proposal and found a new location for it. A motion was made to accept the proposal as revised. The motion was seconded and approved with two negatives. See negative votes below:</p> <p>Mr. Clark: “My reason for voting no is that I believe the content of the item should be tied to a hard requirement (i.e. a “shall”). In my opinion, since everything in this item is a recommendation, it would fall under best engineering practices and should not be included in the code. If a hard requirement were included for the recommendations to build off of, I would be open to it.”</p> <p>Mr. Kleiss: “My negative vote regarding the latest proposed version of 20-86 is in agreement with comments by Mr. Clark and particularly opposition to the location of the proposal rather than the content. The proposal could be appropriate in a supplement but not in the body of the Code.”</p>		

<b>Item Number: 22-28</b>	<b>NBIC Location: Part 1</b>	<b>No Attachment</b>
<p><b>General Description:</b> Pool Heater requirements and definition</p> <p><b>Subgroup:</b> SG Installation</p> <p><b>Task Group:</b> J. Kleiss (PM), R. Spiker, T. Creacy, and M. Byrum</p> <p><b>Explanation of Need:</b> 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.</p>		
<p><b>January 2024 Meeting Action: Progress Report</b></p> <p>Mr. Kleiss presented and outlined his proposal. After revising some of it, the committee decided to send it as a letter ballot to the subgroup to review it more closely.</p>		

<b>Item Number: 22-32</b>	<b>NBIC Location: Part 1, 3.8.1.4 b)</b>	<b>No Attachment</b>
<b>General Description:</b> High pressure limit control requirements for fired jacketed steam kettles		
<b>Subgroup:</b> SG Installation		
<b>Task Group:</b> R. Adams (PM), D. Patten, T. Clark, and T. Creacy		
<b>Explanation of Need:</b> 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.		
<b>January 2024 Meeting Action: Progress Report</b>		
Mr. Adams explained his proposal which included verbiage from ASME Section VIII, Mandatory Appendix 19 (with unnecessary verbiage shown with strikethrough) and other verbiage that addressed the initial needs of this item. The committee decided to send the proposal as a letter ballot to the subgroup.		

<b>Item Number: 23-52</b>	<b>NBIC Location: Part 1, 2.5.3.2 and 3.5.3</b>	<b>No Attachment</b>
<b>General Description:</b> Harmonize electrical requirements for all types of boilers/water heaters		
<b>Subgroup:</b> SG Installation		
<b>Task Group:</b> T. Clark (PM), S. Konopacki, J. Kleiss, R. Spiker, and Jon Choitz		
<b>Explanation of Need:</b> 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.		
<b>January 2024 Meeting Action: Progress Report</b>		
After reviewing the background on this item and Mr. John Frasca's document on utility boiler emergency shutdown switches, Mr. Clark shared his reorganization of the proposal and which parts were taken from CSD-1 and various sections of Part 1. The task group will work to create a copy outlining moved text/text from CSD-1 and a copy showing the new proposed text. The revised copies will then be sent as a letter ballot to the subgroup, and if it passes, as a Review and Comment ballot to the subcommittee.		

**13. New Items:**

<b>Item Number: 23-67</b>	<b>NBIC Location: Part 1, 4.2.2</b>	<b>No Attachment</b>
<b>General Description:</b> Pressure Gage Scale Requirements		
<b>Subgroup:</b> SG Installation		
<b>Task Group:</b> M. Byrum (PM), R. Spiker, Jon Choitz		
<b>Explanation of Need:</b> 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.		
<b>January 2024 Meeting Action: Close with no action</b>		
A task group was created, but the committee determined that the existing verbiage already met the requirements for which the change was proposed. Furthermore, by adding 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.		

14. The committee discussed Mr. Kleiss’s proposal regarding heat pump water heater and heat pump hydronic heater requirements. During the meeting it was assigned action item number 24-05, and the following “item box” was created for the minutes. The committee decided to ask the Executive Committee how to proceed on this since it addresses a new product.

<b>Item Number: 24-05</b>	<b>NBIC Location: Part 1, New Supplement</b>	<b>No Attachment</b>
<b>General Description:</b> Add Heat Pump Water Heater & Heat Pump Hydronic Heater Requirements		
<b>Subgroup:</b> SG Installation		
<b>Task Group:</b> J. Kleiss (PM), Bryan Ahee		
<b>Explanation of Need:</b> Heat pump water heating and hydronic heating are growing in prevalence. Guidance for installation and inspection of these products is needed.		

15. Mr. Ponce informed the committee that there is going to be a new NBIC standing task group reviewing old interpretations to determine which ones are still relevant (while removing irrelevant ones). We need at least two members from each part to participate on this task group.
16. Mr. Brockman reviewed the slide results of the ANSI process questions presented to the Chiefs back in October (on which topics to potentially include in the NBIC). The committee reviewed the questions from Part 1, asked the Chiefs in the meeting if they had feedback, and came up with more specific questions on which to survey the Chiefs (Mr. Clark to report back).

## 17. Future Meetings

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

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

## 18. Adjournment

Mr. Brockman adjourned the meeting at 2:39 p.m. Central Time.

Respectfully submitted,

A handwritten signature in black ink that reads "Michelle Vance". The signature is written in a cursive style with a large initial "M".

Michelle Vance  
Subgroup Installation Secretary

# Subgroup Installation Attendance: January 9, 2024

<b>MEMBERS:</b>	<b>Interest Category</b>	<b>In Person</b>	<b>Remote</b>	<b>Not In Attendance</b>
Joe Brockman	Authorized Inspection Agencies	X		
Eddie Wiggins	Jurisdictional Authorities		X	
Rodger Adams	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
Jeff Kleiss	Manufacturers	X		
Stan Konopacki	Users	X		
Don Patten	NB Certificate Holders	X		
H. Michael Richards	General Interest		X	
Ron Spiker	Jurisdictional Authorities	X		
Melissa Wadkinson	Manufacturers	X		
Michelle Vance	Secretary	X		

<b>VISITORS:</b>	<b>Company / Interest</b>	<b>In Person</b>	<b>Remote</b>
Adrian Gibbs	City of Milwaukee		X
Bryan Ahee	Bradford White Corporation		X
Gary Scribner	NBBI Staff	X	
George Galanes	Diamond Technical Services	X	
Greg Goossens	NBBI Staff	X	
Howard Berny	State of Minnesota		X
John Burpee	State of Maine		X
John Mangas	Becht	X	
Jon Choitz	HSB	X	
Keith Sanford	State of Texas	X	
Ken Misiewics	Pleune Service Company	X	
Luis Ponce	NBBI Staff	X	
Robert Kim Black	ABMA	X	



Robert Smith	US Naval Facilities Engineering Systems Command	x	
Robert Stimson	State of Kansas		x
Rob Troutt	State of Texas	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](mailto: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](mailto: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](mailto: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 Wednesday 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)
THERMOMETER PROVIDED? 8) m)		ELECTRICAL: IS A DISCONNECTING MEANS PROVIDED? 8) o)			
IS A REMOTE EMERGENCY SHUTOFF SWITCH PROVIDED? 8) o)		IS A CARBON MONOXIDE DETECTOR / ALARM PROVIDED? 8) p)			

**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)
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**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.



NBIC Item # 20-86

NBIC Part 1, 2.10.1.1 Boil Out and Steam Blow

- a) It is recommended that newly installed boilers be boiled out prior to operation. New internal surfaces of boilers are subject to oil, grease, and/or other protective coatings, mill scale, rust, welding flux, and/or other foreign material normally associated with the manufacturing process or shipping preparation. All contaminants should be removed as they could lower the heat transfer rate and/or cause localized overheating.
- b) Prior to the commissioning of power boiler steam supply and distribution piping systems, steam blowing is recommended to be used along with chemical cleaning to remove foreign material remaining after plant erection is completed. To minimize the potential of injury to personnel and damage to equipment, the design and location of the associated piping should be addressed by the designer or installer of the boiler and associated piping.
- c) New condensate return piping should also be included in the boil out procedure due to the possibility of contaminants in the piping, such as oil, grease, and/or other protective coatings, rust, welding flux, and/or other foreign material normally associated with the manufacturing process or shipping preparation.
- d) Proper boil out procedures and/or recommended chemicals should be obtained from the boiler/pressure vessel manufacturer or a chemical treatment specialist specializing in boiler water treatment.
- e) All procedures should be reported, if required, to the Jurisdiction.