Date Distributed: January 30, 2023

THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS

NATIONAL BOARD INSPECTION CODE SUBCOMMITTEE PRESSURE RELIEF DEVICES

MINUTES

Meeting of January 11th, 2022
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**

The meeting was called to order at 8:05 AM on Tuesday January 11, 2021 by Vice Chair Adam Renaldo Members and Visitors in attendance can be found on the attendance sheet (Attachments Page 1).

2. **Announcements**

- The National Board will be hosting a reception on Wednesday evening from 5:30pm to 7:30pm in the Colonial Ballroom.

- The National Board will be hosting breakfast and lunch on Thursday. Breakfast will be served from 7:00am to 8:00am, and lunch will be served from 11:30am to 12:30pm. Both meals will be served at the hotel in the Colonial Ballroom.

- Mr. Beirne noted that Mr. Robert Viers will be taking over secretarial duties starting with the July meeting.

3. **Adoption of the Agenda**

The agenda dated January 11, 2023 was presented. A motion was made and seconded to adopt the agenda. A vote was taken and the motion was unanimously approved.

4. **Approval of Minutes from the July 13th, 2022 Meeting**

A motion was made and seconded and seconded to approve the July 2022 minutes. A vote was taken and the motion was unanimously approved.

5. **Review of the Roster (Attachments Page 1)**

   a. **Nominations**
      i. None

   b. **Reappointments**
      i. A motion was made and seconded to reappoint the following individuals to Subgroup Pressure Relief Devices: Alton Cox, Denis DeMichael, David McHugh, Brandon Nutter, Thakor Patel, Adam Renaldo, Delton Schirmer, and Jon Wolf.

   c. **Resignations**
      i. Robert Donaldson and Raymond McCaffrey indicated that they will be resigning from both Subgroup and Subcommittee following this meeting.

d. Officer Selections

Chair—Adam Renaldo (current Vice Chair) was the sole nominee for the Chair position. A motion was made and seconded to recommend Adam Renaldo be appointed Chair of Subcommittee Pressure Relief Devices. After discussion a vote was taken and unanimously passed.

Vice Chair—Alfred Donaldson and Jay Simms were nominated for the Vice Chair position. A secret ballot was conducted to vote on the vice chair. Jay Simms received the majority of the votes and therefore will be recommended to be appointed for the position of Vice Chair of Subcommittee Pressure Relief Devices.

6. Interpretation Requests

Item Number: 22-36	**NBIC Location: Part 4, 4.2.2**	**See attachments page 2-4**
General Description: Use of Code Case 2787 **Task Group:** None **January 2023 Meeting Action:** The proposed interpretation request was presented. A motion was made and seconded to accept the revised proposed question and reply. After discussion a vote was taken. The motion passed with 14 affirmative votes and 2 abstentions (Cox, Donalson).		

7. Action Items

Item Number: NB15-0305	**NBIC Location: Part 4**	**No Attachment**
General Description: Create Guidelines for Installation of Overpressure Protection by System Design. **Task Group:** B. Nutter, A. Renaldo, D. Marek (PM), D. DeMichael, J. Wolf, D. Schirmer **January 2023 Meeting Action:** A revised proposal incorporating comments from the previous letter ballot was presented as a progress report. This will be letter balloted to Subgroups Installation, Inspection, and PRD between meetings.		

Item Number: NB15-0307	**NBIC Location: Part 4**	**No Attachment**
General Description: Create Guidelines for Repair of Pin Devices. **Task Group:** D. McHugh (PM), A. Renaldo, T. Tarbay, R. McCaffrey, Jay Simms, C. Beair, C. Chernisky **January 2023 Meeting Action:** This item will be letter balloted to Subgroup PRD between meetings.		

Item Number: NB15-0315	NBIC Location: Part 4, 2.5.6 and 2.6.6 and Part 1, 4.5.6 and 5.3.6	No Attachment

General Description: Review isolation Valve Requirements, and reword to allow installation of pressure relief devices in upstream piping.

Task Group: D. DeMichael (PM), B. Nutter, A. Renaldo, D. Marek

January 2023 Meeting Action: Work continues on this item. Part 4 text complete, will need to work on Part 1 text. Possible letter ballot to SG between meetings.

Item Number: 19-83	NBIC Location: Part 4, Part 1	No attachment

General Description: Address alternate pressure relief valve mounting permitted by ASME CC2887-1.

Task Group: D. Marek (PM), T. Patel, J. Ball

January 2023 Meeting Action: A revised proposal incorporating comments from the previous letter ballot was presented as a progress report. This will be letter balloted to Subgroups Installation, Inspection, and PRD between meetings.

Item Number: 20-85	NBIC Location: Part 4, 3.2.6, Part 2 2.5.8	No attachment

General Description: Add language to Part 4, 3.2.6 to define test intervals for thermal fluid heaters for PRD's

Subgroup: PRD

Task Group: B. Nutter (PM), T. Patel, D. Schirmer, J. Wolf

Explanation of Need: Need to align Part 4 language with work done under Item 19-88.

January 2023 Meeting Action: This item will be letter balloted to SG Inspection and PRD between meetings.

Item Number: 21-08	NBIC Location: Part 4, S4.4	No attachment

General Description: Additional guidance for tank vent repairs

Subgroup: PRD
Task Group: D. DeMichael (PM), H. Cornett, B. Nutter, K. Beise, J. Grace

Explanation of Need: The recently approved S4.4, "Weight Loaded Vents," (NB12-0901) provided new guidance for tank vent repairs. Several additional topics need to be addressed to enhance the guidance. These topics include: 1) Suggested test equipment and configuration for the prescribed tank vent testing. 2) Minimum requirements for replacement parts, 3) Guidance for painting tank vent components.

January 2023 Meeting Action: Work continues on this item.

Item Number: 21-18	NBIC Location: Part 4, 4.6.4	See attachments page 5

General Description: Pressure tests for pressure relief valve parts.

Subgroup: PRD
Task Group: J. Simms (PM), T. Tarbay, A. Donaldson, D. DeMichael, T. Patel, B. Nutter

Explanation of Need: Pressure relief valve manufacturers must produce valve parts that comply with ASME Code requirements to be able to apply the ASME Symbol Stamp and Designator to a new valve. These parts are the same that are sold as repair parts. The logistic issues to fabricate and maintain an inventory of spare parts not complying with ASME Code requirements is significant versus producing all parts in compliance with code. Consequently, why have a pressure test requirement for parts purchased from the valve manufacturer for those certificate holders who chose to buy parts produced by the manufacturer?

January 2023 Meeting Action: A motion was made and seconded to accept the attached proposal. After discussion a vote was taken and the motion passed unanimously.

Item Number: 21-36	NBIC Location: Part 4, 3.3.3.4 i)	No Attachment

General Description: Add Test Details to NBIC Part 4, 3.3.3.4 i) Valve Adjustment and Sealing

Subgroup: PRD

Task Group: D. Marek (PM), A. Cox, P. Dhobi, T. Patel

Explanation of Need: There is no reference in the T/O requirements for Set Pressure Testing, use of proper Test Fluid or Seat Tightness unless and until a minor adjustment is required. This is surely the intent, but it is not clearly specified as it is in the current VR requirements.

January 2023 Meeting Action: Work continues on this item.

Item Number: 21-59	NBIC Location: Part 4, 3.2.6, Part 2, 2.5.8	See attachments page 6

General Description: Deferral of inspection due dates (pressure relieving devices NBIC PART IV)

Subgroup: PRD

Task Group: T. Beirne (PM)

Explanation of Need: Since the code has clearly recommended inspection frequency intervals for the different classes of pressure relief devices, it shall have the requirements related to the deferral of due dates. The inspection due date deferrals are usually not considered but in exceptional cases where operating plant may not be able to handover the device due to some practical limitations or the turnaround frequency of the plant is extended due to stakeholders' requirements etc. The owner is usually ensuring that a deferment is not posing any significant EHSS risk by proper risk analysis but a clarity from code on the minimum or maximum duration the device can be deferred will add a great value in decision making. There are some codes which have added deferment clauses such as API 510 but the NBIC is always having precedence in this subject and shall have statement added to its code.

January 2023 Meeting Action: A motion was made and seconded to accept the proposal that was presented. After discussion a vote was taken and the motion unanimously passed. However, after the meeting adjourned Subcommittee Inspection was presented with this proposal and had comments that require revision. The proposal will be revised and letter balloted between meetings.

Item Number: 21-61	NBIC Location: Part 4, 3.3.4	No Attachment

General Description: Audit Requirements for the T/O holder

Subgroup: PRD

Task Group: A. Donaldson (PM), A. Cox, J. Simms, P. Dhobi, T. Tarbay, D. Marek

Explanation of Need: Opened as a result of a Subgroup PRD ballot comment from item 21-05 (Shop audits for VR certificate holders). The comment recommended adding requirements specifically for organizations that are T/O only.

January 2023 Meeting Action: This item will be letter balloted to SG PRD between meetings

Item Number: 21-62	NBIC Location: Part 4, 4.8.5.4 i) 3)	No Attachment

General Description: Verification of existing spring during repair activities

Task Group: A. Donaldson (PM), B. Nutter, E. Creaser, P. Dhobi, T. Patel, J. Simms, J. Grace, D. Gonzales, T. Cardy

Explanation of Need: This requirement has created an administrative requirement that potentially prevents a VR Stamp holder from applying the "VR" stamp to valves they have repaired. The requirement is negatively impacting owners, and jurisdictions that enforce the NBIC Part 4. This clause introduces a unique requirement in the BPV industry to confirm that code material in a Code stamped item be verified and traceable at all time after the item is ASME code stamped but the verification can only be provided by the manufacturer. Historically, any valve received or worked on that was sealed by a VR Stamp holder or in the case of an initial repair the ASME assembler was deemed to be Code compliant, and no further verification was needed recognizing the validity and continuity of the ASME and VR quality programs. It is clearly understood that if a spring, or any other critical part is deemed necessary to be replaced during a repair the manufactures verification is required and justifiable.

January 2023 Meeting Action: A motion was made and seconded to accept the presented proposal. After discussion the motion was withdrawn and the item will be reworked in the task group.

Item Number: 22-08	NBIC Location: Part 4, 2.4.1.6 & 2.4.4.2; Part 1, 3.9.1.6 & 3.9.4.2	No Attachment

General Description: Review and improve guidance for T&P valve installation relating to probe.

Subgroup: PRD

Task Group: D. Marek (PM), J. Ball, J. Wolf, T. Clark

Explanation of Need: Existing text refers to location of valve connection and does not give guidance that the temperature probe needs to be located in the hottest water in the tank for the valve to actuate at the specified temperature.

January 2023 Meeting Action: Work continues on this item

Item Number: 22-09	NBIC Location: Part 4, 4.6.1	No Attachment

General Description: Add language to NBIC Part for valves manufactured to Code Case 2787

Subgroup: PRD

Task Group: A. Donaldson (PM), R. Donalson, B. Nutter, T. Tarbay, J. Simms

Explanation of Need: There are no requirements to address valve repairs that were manufactured or assembled to Code Case 2787 (use of more than one certified capacity on the pressure relief valve or the nameplate).

January 2023 Meeting Action: Work continues on this item

Item Number: 22-15	NBIC Location: Part 4, 2.4.5 and Part 1, 3.9.5	No Attachment

General Description: What is the meaning of "service limitations" as used in Part 4, 2.4.5?

Subgroup: PRD

Task Group: T. Beirne (PM), B. Nutter, T. Clark

Explanation of Need: Part 4, 2.4.5 (also Part 1, 3.9.5) references "service limitations set forth in Part 1, 3.2, Definitions" when establishing pressure relief requirements for tanks and heat exchangers. Part 1, 3.2 points readers to the glossary. As "service limitations" is not itself defined within the glossary, and the term does not appear elsewhere in the code, what specific service limitations are being referenced?

January 2023 Meeting Action: This item will be letter balloted to Subgroups Installation and PRD between meetings

Item Number: 22-16	NBIC Location: Part 4, 2.4.4 and Part 1, 3.9.4	No Attachment

General Description: Allow the use of pressure relief valves on potable water heaters.

Subgroup: PRD

Task Group: D. Sullivan (PM), J. Ball, T. Clark

Explanation of Need: ASME Section IV, Part HLW-800.1 allows the use of pressure relief valves in place of temperature and pressure relief valves on potable water heaters. NBIC Parts 1 and 4 specifically require temperature and pressure relief valves, which is not consistent with the code of construction. Some manufacturers are shipping HLW stamped potable water heaters with pressure relief valves. Often the physical construction of these units is such that a temperature and pressure relief valve cannot be accommodated.

January 2023 Meeting Action: This item will be letter balloted to Subgroups Installation and PRD between meetings

Item Number: 22-20	NBIC Location: Part 4, 4.7.4	No Attachment

General Description: Inspection and testing of PRV's located above isolation valves.

Subgroup: PRD

Task Group: D. Marek (PM), K. Beise, J. Ball, E. Creaser, H. Cornett, A. Renaldo

Explanation of Need: Add requirement to make sure the internals of a PRV inlet and outlet are inspected when it is tested, and require tests to be done with a pressure vessel with volume.

January 2023 Meeting Action: Work continues on this item.

8. New Business

Item Number: 22-34	NBIC Location: Part 4, S6.3 & S6.5	Attachment pages 7

General Description: Update duplicate nameplate marking requirements in Supplement 6

Subgroup: PRD

Task Group: None assigned.

Explanation of Need: With the publication of Section XIII updates to the duplicate nameplate requirements were needed to refer to designator rather than code section. This item will also make the marking requirements consistent with those in the pending publication of updated paragraph 4.7.4 resulting from item 21-84.

January 2023 Meeting Action: A motion was made and seconded to accept the attached proposal. After discussion a vote was taken and the motion passed unanimously.

Item Number: 22-35	NBIC Location: Part 4, 4.6.2	Attachment pages 8

General Description: Update reference of Section VIII steam valves to UV designated steam valves

Subgroup: PRD

Task Group: None assigned.

Explanation of Need: With the publication of Section XIII new UV designated valves are constructed to Section XIII. The references should be to UV designator not code section.

January 2023 Meeting Action: A motion was made and seconded to accept the attached proposal. After discussion a vote was taken and the motion passed unanimously.

9. Presentations

None

10. Future Meetings

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

11. Adjournment

The meeting was adjourned at 3:10 PM.

Respectfully Submitted,

Thomas P. Beirne, P.E.
Secretary, NBIC Subgroup Pressure Relief Devices
pc: J. Amato
G. Galanes
J. Ellis

Subcommittee PRD Attendance - July 13, 2022

MEMBERS:	Interest Category	In Person	Remote	Not In Attendance
Adam Renaldo-Vice Chair	Users	X		
Thomas Beirne - Secretary		X		
Kim Beise	National Board Certificate Holders		X	
J. Alton Cox	General Interest	X		
Eben Creaser	Jurisdiction	X		
Denis DeMichael	Users		X	
Prakash Dhobi	National Board Certificate Holders	X		
Alfred Donaldson	Manufacturers		X	
Robert Donalson	Manufacturers	X		
Daniel Marek	General Interest		X	
Raymond McCaffrey	General Interest			X
David McHugh	National Board Certificate Holders	X		
Brandon Nutter	National Board Certificate Holders		X	
Thakor Patel	Manufacturers		X	
Delton Schirmer	Authorized Inspection Agencies	X		
David Sullivan	Jurisdiction	X		
Jon Wolf	Authorized Inspection Agencies	X		
Jay Simms	Manufacturers	X		

VISITORS:	Company/Title/Interest	In Person	Remote
Luis Ponce	NBBI	X	
Gary Scribner	NBBI	X	
Clark Turner	Calder	X	
Jeremy Grace	Chemours	X	
Hank Cornett	Emerson Automation Solutions	X	
Craig Theiler	Law Valve of Texas	X	
Ray Ceccarelli	FM Global	X	
Kim Black	ABMA	X	
Bob Viers	NBBI	X	
Thomas Tarbay	TRT Consultants	X	

THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS

PROPOSED INTERPRETATION

Item No.

22-36

Subject/Title

Use of Code case 2787 in Repairs

Project Manager and Task Group

Source (Name/Email)

Alfred Donaldson / alfred.donaldson@bakerhughes.com

Statement of Need

Code Case 2787 was approved by ASME to allow a manufacturer to develop valves that will work on multimedia applications without any required adjustments. These valves may have different components and will have multiple certified capacities. As these valves are entering the marketplace, some customers are requesting that their existing valves get converted to the multimedia type valves. This request would allow the NBIC Committee to adopt the Code Case for use in the VR program in accordance with NBIC Part 4.2.2 and allow the VR holder to convert a valve to a multimedia design that has more than one certified capacity on the valve nameplate.

Background Information

This is a Part 4 issue but the system only shows Part 1 & 2

Proposed Question

Under the provisions of paragraph 4.2.2, where it is stated "ASME Code Cases may be used when they have been accepted for use by the NBIC Committee and the Jurisdiction where the pressure-retaining item is installed," is it permissible to perform a conversion and apply ASME Code Case 2787?

Proposed Reply

Proposed Reply: Yes, provided that the “VR” Certificate Holder verifies that: 1. All of the requirements of ASME Code Case 278 are met, and 2. That all of the requirements of the NBIC concerning conversions, and specifically paragraph 4.7.3 are met.

Committee's Question 1

Under the provisions of paragraph 4.2.2, where it is stated "ASME Code Cases may be used when they have been accepted for use by the NBIC Committee and the Jurisdiction where the pressure-retaining item is installed," is it permissible to perform a conversion and apply ASME Code Case 2787?

Committee's Reply 1

Proposed Reply: Yes, provided that the Jurisdiction accepts ASME Code Case 2787 and the “VR” Certificate Holder verifies that: 1. All of the requirements of ASME Code Case 2787 are met, and 2. That manufacturer's instructions and all of the requirements of the NBIC concerning conversions are met, and all certified capacities are marked on the repair nameplate.

Rationale

Committee's Question 2

Committee's Reply 2

Rationale

Tom Beirne

From: Alton Cox <alton@jaltoncox.com>
Sent: Tuesday, January 10, 2023 9:48 AM
To: Tom Beirne
Cc: Bob Viers
Subject: ITEM 22-36

Tom:

Regarding NBIC Part 4, SG-PRD, Item 22-36, for interpretation of ASME Code Case 2787 for use in VR Conversions, my negative is based on the following issues:

1) I understand the intent, but I do not agree with the wording, "Provision to include all the requirements of the Code Case." "All" appears to require Capacity Testing by the VR Holder.
2) Ambiguity of the second sentence of the explanation, "*These valves may have different components and will have multiple certified capacities."* This sounds like there may be parts changes required for specific fluids, but retesting is NOT required. I don't see how that can be multi-media.
3) Third sentence appears to say "us," but the content infers "use." Needs editing.
4) Proposed reply should read Code case 2787 rather than 278.

Thank you for the opportunity to express my concerns.

Regards,
Alton Cox

Interpretation Request Item 22-36

Use of Code Case 2787 in repairs

NBIC SG Pressure Relief Device

I am abstaining from voting on this item as I am concerned, we have not provided enough clarification on how this interpretation would be implemented. The reference paragraphs in the Code Case have changed, the reference to the code case nameplate is not clear, no guidance for listing the multiple capacities on the repair nameplate, no guidance on what nameplate the code case number should appear as part of the conversion.

In my opinion this interpretation should be limited to repairs of pressure relief valves which currently bear the code case number only. To extend this interpretation to say cover conversions of pressure relief valves that were not originally manufactured/assembled to Code Case 2787 should be addressed under the current open Item #22-09 “add language to NBIC Part 4 for valves manufactured to Code Case 2787.

Bob Donalson

ITEM 21-18 Proposal 1/10/23

4.6.4 PRESSURE TEST OF PARTS

a) Parts, used in repaired valves, that are required to be pressure tested by the original code of construction, shall be pressure tested and documentation provided according to the following categories:

1) Replacement Parts

The "VR" Certificate Holder is responsible for documentation that the appropriate pressure test has been completed. ~~, as required by the original code of construction.~~

2) Parts Repaired by Welding

These parts shall be subjected to ~~a~~the required pressure test ~~required by the original code of construction~~. The "VR" Certificate Holder shall be responsible for documentation of such test.

b) Parts repaired by re-machining within part specification, lapping, or polishing do not require a pressure test.

ITEM 21-59 Proposal 1/10/23

NBIC Part 4

3.2.6 RECOMMENDED INSPECTION AND TEST FREQUENCIES FOR PRESSURE RELIEF DEVICES

Frequency of test and inspection of pressure relief devices is greatly dependent on the service, external environment, and operation of the system, therefore only general recommendations can be given. Inspection frequency should be based on previous inspection history and/or manufacturer's recommendations. Where the Jurisdiction has adopted other Standards for specific applications, those Standards may be used. If, during inspection, valves are found to be defective or damaged, intervals should be shortened until acceptable inspection results are obtained. Where test records and/or inspection history
are not available, the following inspection and test frequencies are suggested:

NBIC Part 2

2.5.8 RECOMMENDED INSPECTION AND TEST FREQUENCIES FOR PRESSURE RELIEF DEVICES

Frequency of test and inspection of pressure relief devices is greatly dependent on the service, external environment, and operation of the system, therefore only general recommendations can be given. Inspection frequency should be based on previous inspection history and/or manufacturer's recommendations. Where the Jurisdiction has adopted other Standards for specific applications, those Standards may be used. If, during inspection, valves are found to be defective or damaged, intervals should be shortened until acceptable inspection results are obtained. Where test records and/or inspection history
are not available, the following inspection and test frequencies are suggested:

ITEM 22-34 12/1/22

S6.3 NUCLEAR SAFETY RELATED VALVE GROUPS

These rules classify nuclear safety related pressure relief valves into three groups based upon the original code of construction and capacity certification status.

Group 1: ASME ~~Section I and Section VIII~~"V" and "UV" designated pressure relief valves accepted by the Jurisdiction for use in nuclear safety related service with National Board capacity certification.

Group 2: ASME ~~Section III~~ "NV" ~~stamped~~ designated Class 1, 2, or 3 pressure relief valves with National Board capacity certification.

Group 3: Pressure relief valves not addressed in Group 1 or Group 2. This group shall include pressure relief valves without National Board capacity certification and/or pressure relief valves constructed to codes or standards other than ASME (see NBIC Part 3, Category 3).

The term pressure relief valve includes power actuated pressure relief valves. Replacement of rupture disks in rupture disk holders or in systems is not considered a repair activity under the scope of this supplement.

S6.5 GENERAL RULES

e) When an ASME "V", "UV" or "NV" ~~stamped~~ designated pressure relief device requires a duplicate nameplate because the original nameplate is illegible or missing, it may be applied using the procedures of NBIC Part 4, 4.7.4 provided concurrence is obtained from the Authorized Nuclear Inspector and Jurisdiction. In this case the nameplate shall be marked "~~SEC. I~~V", "~~SEC. III~~NV", or "~~SEC. VIII~~UV" to indicate original ASME Code stamping or designator.

ITEM 22-35 1/10/23

4.6.2 OWNER-USER ~~ASME CODE SECTION VIII STEAM~~ TESTING OF ASME "UV" DESIGNATED STEAM SERVICE VALVES

When ASME ~~Code Section VIII~~ "UV" designated valves are repaired by the owner for the owner's own use, valves for steam service may be tested on air for set pressure and, if possible, blowdown adjustment, provided the valve manufacturer's corrections for differential in set pressure between steam and air are applied to determine the test pressure as follows:

Staff editorial note: Table of Contents will need to be updated