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

**NATIONAL BOARD  
SUBCOMMITTEE  
PRESSURE RELIEF DEVICES**

**MINUTES**

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Meeting of January 10, 2018  
Columbus, OH

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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 8:00 AM on Tuesday January 10, 2018 by Chair Sid Cammeresi.

The following members and visitors were in attendance:

### Members

Marrienne Brodeur  
Kevin Simmons  
Brandon Nutter  
Sid Cammeresi  
Adam Renaldo  
Dan Marek  
David McHugh  
Raymond McCaffrey  
Kim Beise  
J. Alton Cox  
Thomas P. Beirne, P.E.  
R.W. Donalson

### Affiliation

International Valve & Instrument Corp.  
Emerson  
DuPont  
TeamFurmanite  
Praxair  
Mainthia Technologies  
Allied Valve, Inc.  
Quality Valve, Inc.  
Dowco Valve  
JAC Consulting, Inc.  
National Board (Subgroup Secretary)  
Emerson

### Members Not Present

Thakor Patel  
Denis DeMichael

Farris Engineering  
The Chemours Company

### Visitors

Joseph Ball (Teleconference)  
Alfred Donaldson  
Tom Tarbay  
Prakash Dhobi

National Board  
Baker Hughes  
TRT Consultants  
The Valve Automation Center

## 2. Announcements

Mr. Cammeresi announced the reception for Wednesday and meals provided.

## 3. Adoption of the Agenda

The agenda dated December 20, 2017 was presented. The motion was unanimously approved.

## 4. Approval of Minutes

It was moved and seconded to approve the minutes of the July 2017 meeting of the Subcommittee on Pressure Relief Devices. The motion was unanimously approved.

**5. Review of the Roster**

**a. Nominations**

- There are no applications for membership to SC PRD.

**b. Reappointments**

- J. Alton Cox—SC PRD. Mr. Cox indicated he is interested in continuing his membership. This item is on the Main Committee agenda for action.

**c. Resignations**

- None

**d. Officer Selection**

- SC PRD Vice Chair—Ms. Marrienne Brodeur and Mr. Brandon Nutter were candidates for Vice Chair. A secret ballot was used to vote for the Vice Chair. Ms. Brodeur won by a majority vote. The recommendation for Vice Chair was passed on to the Main Committee for consideration.

**6. Interpretations**

- None

**7. Action Items**

<b>Item Number: NB12-0901</b>	<b>NBIC Location: Part 4</b>	<b>No Attachement</b>
<b>General Description:</b> Prepare a guide for repair of tank vents		
<b>Task Group:</b> D. DeMichael (PM), K. Simmons, B. Donalson, K. Beise, B. Nutter		
<b>Meeting Action:</b> Work on the text continues and may have draft by the next meeting.		

<b>Item Number: NB14-0602A</b>	<b>NBIC Location: Part 1</b>	<b>Attachment A</b>
<b>General Description:</b> Improve index in Part 1 relating to pressure relief devices		
<b>Task Group:</b> M. Brodeur (PM), S. Cammeresi, K. Beise		
<b>Meeting Action:</b> A proposal was presented. A motion was made and seconded to accept the proposal. The motion unanimously passed.		

<b>Item Number: NB14-0602B</b>	<b>NBIC Location: Part 2</b>	<b>No Attachment</b>
<b>General Description:</b> Improve index in Part 2 relating to pressure relief devices		
<b>Task Group:</b> D. Marek (PM), B. Donalson, D. DeMichael, B. Hart		
<b>Meeting Action:</b> Should have proposal to letter ballot between meetings.		

<b>Item Number: NB14-0602C</b>	<b>NBIC Location: Part 3</b>	<b>No Attachment</b>
<b>General Description:</b> Improve index in Part 3 relating to pressure relief devices		
<b>Task Group:</b> B. Nutter (PM), R. McCaffrey, T. Patel, K. Simmons		
<b>Meeting Action:</b> A final review will be conducted to see if this item can be closed with no action. Will most likely close at next meeting.		

<b>Item Number: NB15-0108B</b>	<b>NBIC Location: Part 1</b>	<b>No Attachment</b>
<b>General Description:</b> Address pressure relief devices in new supplement on high temperature hot water boilers		
<b>Task Group:</b> A. Renaldo (PM), D. Marek, D. McHugh, B. Nutter		
<b>Meeting Action:</b> Work continues on this item.		

<b>Item Number: NB15-0305</b>	<b>NBIC Location: Part 4</b>	<b>No Attachment</b>
<b>General Description:</b> Create Guidelines for Installation of Overpressure Protection by System Design.		
<b>Task Group:</b> B. Nutter, A. Renaldo, D. Marek (PM), D. DeMichael		
<b>Meeting Action:</b> Work continues on this item.		

<b>Item Number: NB15-0307</b>	<b>NBIC Location: Part 4</b>	<b>No Attachment</b>
<b>General Description:</b> Create Guidelines for Repair of Pin Devices.		
<b>Task Group:</b> D. McHugh (PM), A. Renaldo, T. Tarbay		
<b>Meeting Action:</b> Work continues on this item. Should have draft by next meeting. K. Kraabel removed from task group.		

<b>Item Number: NB15-0308</b>	<b>NBIC Location: Part 4</b>	<b>No Attachment</b>
<b>General Description:</b> - Create Guidelines for Installation of Pressure Relief Devices for Organic Fluid Vaporizers.		
<b>Task Group:</b> T. Patel (PM), K. Beise, B. Nutter		
<b>Meeting Action:</b> A draft proposal was presented. After discussion the proposal will be revised. Should have proposal ready to vote on by next meeting.		

<b>Item Number: NB15-0310</b>	<b>NBIC Location: Part 4, 4.4.8.5 i)3)</b>	<b>Attachment B</b>
<b>General Description:</b> Give Guidance as to Which Spring Chart Should be used in Repairs.		
<b>Task Group:</b> A. Cox (PM), B. Nutter, M. Brodeur, T. Patel, K. Simmons, R. McCaffrey, S. Irvin		
<b>Meeting Action:</b> Proposal was presented. A motion was made and seconded and passed unanimously with the exception of one negative (R. W. Donalson).		
<b>Item Number: NB15-0315</b>	<b>NBIC Location: Part 4, 2.5.6 and 2.6.6 and Part 1,</b>	<b>No Attachment</b>
<b>4.5.6 and 5.3.6</b>		
<b>General Description:</b> Review isolation Valve Requirements, and reword to allow installation of pressure relief devices in upstream piping.		
<b>Task Group:</b> D. DeMichael (PM), B. Nutter, A. Renaldo, D. Marek		
<b>Meeting Action:</b> Work continues on this item.		
<b>Item Number: NB15-0321</b>	<b>NBIC Location: Part 4, 3.2.5 a) and Part 2, 2.5.7 a)</b>	<b>No Attachment</b>
<b>General Description:</b> Review testing requirements for inservice testing of pressure relief devices		
<b>Task Group:</b> A. Cox, A. Renaldo (PM), D. Marek, S. Irvin, D. DeMichael, B. Nutter, J. Ball		
<b>Meeting Action:</b> A draft proposal was presented and will be letter balloted to the Subgroup after this meeting.		
<b>Item Number: NB15-0324</b>	<b>NBIC Location: Part 4</b>	<b>No Attachment</b>
<b>General Description:</b> Create Guidelines for Inspection and Testing Frequencies with respect to shelf life and storage of pressure relief valves.		
<b>Task Group:</b> A. Rendaldo (PM), B. Nutter, K. Simmons, D. Marek, J. Little		
<b>Meeting Action:</b> Mr. Renaldo presented a draft proposal that will be letter balloted to the Subgroup after this meeting.		
<b>Item Number: NB16-0401</b>	<b>NBIC Location: Part 4</b>	<b>Attachment C</b>
<b>General Description:</b> VR Nameplate attachment		
<b>Task Group:</b> A. Donaldson (PM), S. Irvin, T. Patel, D. Marek, M. Brodeur, B. Nutter		
<b>Meeting Action:</b> A proposal was presented. After discussion, a motion was made and seconded to accept the proposal. The motion passed unanimously.		
<b>Item Number: NB16-0603</b>	<b>NBIC Location: Part 4 S6</b>	<b>No Attachment</b>
<b>General Description:</b> Add requirements for when the "NR" program is applied to safety related relief valves in nuclear service, came from NR task group		
<b>Task Group:</b> NR Task Group		
<b>Meeting Action:</b> This item is on MC letter ballot due to close 1/12/18.		

<b>Item Number: NB16-0805</b>	<b>NBIC Location: Part 4, 2.6.6 and Part 1, 5.3.6</b>	<b>No Attachment</b>
<b>General Description:</b> Temperature ratings for discharge piping and fittings		
<b>Task Group:</b> A. Renaldo (PM), T. Patel, D. Marek, J. Ball		
<b>Meeting Action:</b> Task group work continues on this item.		

<b>Item Number: NB17-0401</b>	<b>NBIC Location: Part 4</b>	<b>No Attachment</b>
<b>General Description:</b> Valve drain plug recommendations for shipping.		
<b>Task Group:</b> (PM) K. Beise, M. Brodeur, R. McCaffrey		
<b>Meeting Action:</b> Work continues on this item.		

<b>Item Number: NB17-0402</b>	<b>NBIC Location: Part 4</b>	<b>No Attachment</b>
<b>General Description:</b> Review Part 4 Index.		
<b>Task Group:</b> A. Cox (PM), S. Irvin, K. Beise, K. Simmons		
<b>Meeting Action:</b> Work continues on this item.		

<b>Item Number: NB17-0403</b>	<b>NBIC Location: Part 4</b>	<b>No Attachment</b>
<b>General Description:</b> Review Part 4 for including new T/O requirements.		
<b>Task Group:</b> (PM) K. Simmons, D. McHugh, A. Cox, D. Marek, A. Donaldson		
<b>Meeting Action:</b> Work continues on this item. A. Donaldson added to task group.		

<b>Item Number: NB17-0404</b>	<b>NBIC Location: Part 4</b>	<b>No Attachment</b>
<b>General Description:</b> Add missing paragraphs g)-j) in Part 4, 2.3.6 to Part 1, S5.7.6		
<b>Task Group:</b> (PM) B. Nutter, T. Beirne, D. Marek		
<b>Meeting Action:</b> A task group was formed to work on this item.		

<b>Item Number: 17-115</b>	<b>NBIC Location: Part 4, Section 2</b>	<b>No Attachment</b>
<b>General Description:</b> Complete rewrite of Section 2 combining common requirements into a general requirements section for all pressure relief devices and look at combining with 2.4.3, 2.4.4.		
<b>Task Group:</b> A. Renaldo (PM), D. McHugh, D. Marek		
<b>Meeting Action:</b> Work continues on this item.		

<b>Item Number: 17-117</b>	<b>NBIC Location: Part 4, 2.2.1 g) and Part 1, 2.9.1 g)</b>	<b>Attachment D</b>
<b>General Description:</b> clarify what "properly vented" means		
<b>Task Group:</b> R. McCaffrey (PM), M. Brodeur		
<b>Meeting Action:</b> A proposal was presented. A motion was made and seconded to accept the proposal. The motion unanimously passed.		

<b>Item Number: 17-118</b>	<b>NBIC Location: Part 4, 2.2.4 c) and Part 1, 2.9.1.3 c)</b>	<b>Attachment E</b>
<b>General Description:</b> Provide metric equivalent and possibly express conversion as formula instead of paragraph.		
<b>Task Group:</b> B. Nutter (PM)		
<b>Meeting Action:</b> Mr. Nutter presented a proposal. A motion was made and seconded to accept the proposal. A vote was taken and the motion unanimously passed.		
<b>Item Number: 17-119</b>	<b>NBIC Location: Part 4, 2.2.5 and Part 1, 2.9.1.4</b>	<b>No Attachment</b>
<b>General Description:</b> States pressure setting may exceed 10% range. Clarify by how much.		
<b>Task Group:</b> T. Patel (PM), D. Marek		
<b>Meeting Action:</b> It was determined that the same language was in ASME Section I. The task group decided to put this item on hold pending completion of ASME action item.		
<b>Item Number: 17-120</b>	<b>NBIC Location: Part 4, 2.2.10 d) and Part 1, 2.9.6 d)</b>	<b>Attachment F</b>
<b>General Description:</b> Add Changeover valve definition in glossary and remove definition from text.		
<b>Task Group:</b> A. Renaldo (PM)		
<b>Meeting Action:</b> Mr. Renaldo presented a proposal. After discussion and revision, a motion was made and seconded to accept the proposal. The motion unanimously passed.		
<b>Item Number: 17-121</b>	<b>NBIC Location: Part 4, 2.2.10 e), h) and Part 1 2.9.6 e),h)</b>	<b>No Attachment</b>
<b>General Description:</b> e) Language needs cleaned up. h) delete "so located or piped as to be carried clear from running boards or platforms."		
<b>Task Group:</b> None assigned.		
<b>Meeting Action:</b> This item is on MC letter ballot due to close 1/12/18.		
<b>Item Number: 17-122</b>	<b>NBIC Location: Part 4, 2.3.6 g) and Part 2, 2.2.12.7 f)</b>	<b>No Attachment</b>
<b>General Description:</b> Clean up last sentence of main paragraph. Possibly break into two paragraphs to consider hazards at the discharge and hazards along discharge piping		
<b>Task Group:</b> T. Patel (PM), B. Nutter, K. Beise		
<b>Meeting Action:</b> A draft proposal was presented as a progress report.		
<b>Item Number: 17-125</b>	<b>NBIC Location: Part 4, 2.4.2 and Part 1, 3.9.2</b>	<b>No Attachment</b>
<b>General Description:</b> Delete last sentence "The inlet opening shall have an inside diameter equal to or greater than the seat diameter". This is a manufacturing requirement and the inspector has no way of verifying this after installation.		
<b>Task Group:</b> None assigned.		
<b>Meeting Action:</b> This item is on MC letter ballot due to close 1/12/18.		

<b>Item Number: 17-126</b>	<b>NBIC Location: Part 4, 2.4.2 and Part 1, 3.9.2</b>	<b>No Attachment</b>
<b>General Description:</b> Determination of the valve capacity using the maximum output method needs to be described or delete reference.		
<b>Task Group:</b> D. Marek (PM), J. Ball		
<b>Meeting Action:</b> Work continues on this item.		

<b>Item Number: 17-127</b>	<b>NBIC Location: Part 4, 2.4.4.1 and Part 1, 3.9.4.1</b>	<b>No Attachment</b>
<b>General Description:</b> rewrite to state "Temperature and pressure relief valves shall be installed by either the manufacturer or the equipment installer before a water heater is placed in operation."		
<b>Task Group:</b> None assigned.		
<b>Meeting Action:</b> This item is on MC letter ballot due to close 1/12/18.		

<b>Item Number: 17-128</b>	<b>NBIC Location: Part 4, 2.4.4.3 and Part 1, 3.9.4.3</b>	<b>No Attachment</b>
<b>General Description:</b> allows Y-base to be used while 2.4.1.6 a) prohibits. This appears to be a conflict.		
<b>Task Group:</b> B. Nutter (PM), S. Irvin		
<b>Meeting Action:</b> Work continues on this item.		

<b>Item Number: 17-130</b>	<b>NBIC Location: Part 4, 2.5.6 f) and Part 1, 4.5.6 f)</b>	<b>No Attachment</b>
<b>General Description:</b> This could just point to safe point of discharge since we have a definition		
<b>Task Group:</b> None assigned.		
<b>Meeting Action:</b> This item is on MC letter ballot due to close 1/12/18.		

<b>Item Number: 17-131</b>	<b>NBIC Location: Part 4, 2.5.7 a) and Part 1, 4.7.3 a)</b>	<b>No Attachment</b>
<b>General Description:</b> Review overpressure protection requirements for hot water storage tanks that exceed 160 psi.		
<b>Task Group:</b> J. Ball (PM)		
<b>Meeting Action:</b> Work continues on this item.		

<b>Item Number: 17-132</b>	<b>NBIC Location: Part 4, 3.2.6 and Part 2, 2.5.8</b>	<b>No Attachment</b>
<b>General Description:</b> Paragraph 3.2.6 can be put into tabular format.		
<b>Task Group:</b> B. Nutter (PM), M. Brodeur, D. Marek, D. DeMichael, A. Cox, P. Dhobi, R. McCaffrey, T. Beirne		
<b>Meeting Action:</b> This item was letter balloted between meetings and received several negatives and comments. A task group was formed to work on this item and bring it back for first consideration.		

## 8. New Business

- None



## **9. Presentations**

- None

## **10. Future Meetings**

January 10, 2018 – New Orleans, LA

July 18, 2018 – Columbus, Ohio

## **11. Adjournment**

A motion was made, seconded, voted on, and unanimously passed to adjourn the meeting at approximately 2:00 PM.

Respectfully Submitted,

Thomas P. Beirne, P.E.

Secretary, NBIC Subcommittee Pressure Relief Devices

pc: D. Douin

D. Cook

J. Metzmaier

## **NB14-0602A- IMPROVE INDEX PART I**

### **SUGGESTED CHANGES: PRESSURE RELIEF DEVICES**

- (1.4.5.1.1) 23,24,25,26 specific to PRV's
- (2.9.6) delete refer to (2.9)
- (4.4.2) delete refers to pressure gauge
- (4.5.1)-(4.5.6) delete refer to (4.5)
- (5.3.1)-(5.3.6) delete refer to (5.3)
- (S5.5.2)
- (S5.7.2)-(S5.4.6) delete refer to (S5.7)

### **NEW INDEX PRESSURE RELIEF DEVICES**

- (1.4.5.1.1) 23,24,25,26 (2.9) (4.5) (5.3) (S5.7)

### **SUGGESTED CHANGES-MOUNTING**

- (3.9) add in
- (3.9.1) delete note word mounting should say installing & connecting only
- (3.9.1.1.1) (3.9.1.3) (3.9.4.2) (3.9.4.5) delete
- Refer to (3.9) note use of word mounting should be changed to installation.

### **NEW INDEX**

- (3.9)

### **SUGGESTED CHANGES** **SAFETY /SAFETY RELIEF VALVES**

- (1.4.5.1.1) Guide for completing National Board Boiler Installation Report
- (2.5.1.1) Volume
- (2.9) Pressure Relief Valves
- (2.9.1) Valve Requirements-General-delete
- (2.9.1.1) (2.9.1.2) (2.9.1.3) (2.9.1.4) delete
- All covered under (2.9)
- (2.9.3) Super heaters- delete
- (2.9.4) Economizers-delete
- (2.9.5) Pressure Reducing Valves- delete
- (2.9.6) Mounting & Discharge Requirements  
(Installation) delete
- All covered on 2.9

- (3.7.4) Feedwater, Makeup Water & Water Supply
- (3.7.5) Stop Valves- delete – There is no reference to Pressure Relief Valves
- (3.7.7.1) Steam Heating, Hot Water Heating,  
Hot Water Supply Boilers
- (3.7.8.1) Individual Modules
- (3.7.9.1) Expansion Tanks
- (3.8.2.1) Pressure or Altitude Gages
- (3.9.1.1) delete refer to 3.9-note remove word mounting
- (3.9.1.1.1) Permissible Mounting (Installation)  
delete refer to 3.9
- (3.9.1.1.2) delete refer to 3.9
- (3.9.1.3) delete refer to 3.9
- (3.9.1.4) listed twice refer to 3.9
- (3.9.1.6) delete
- (3.9.3) (3.9.4) delete refer to 3.9
- (3.9.4.1) (3.9.4.7) delete refer to 3.9
- (3.9.5) (3.9.5.1) (3.9.5.2) delete refer to 3.9
- (S1.2) (S2.5) (S3.6) (S5.5.2)
- (S5.5.7) delete –not applicable-electrical

#### **NEW INDEX SAFETY/RELIEF VALVES**

- (1.4.5.1.1) (2.5.1.1) (2.9) (3.7.4) (3.7.7.1) (3.7.8.1) (3.7.9.1) (3.8.2.1) (3.9) (S1.2)  
(S2.5) (S2.6) (S5.5.2) (9.1)

#### **SAFETY VALVE CAPACITY**

- (3.7.7.1) (3.9.2) (S2.2) No change

#### **SUGGESTED CHANGES – SET PRESSURE**

- (1.4.5.1) (1.4.5.1.1)  
(2.73) (2.75) (2.8.1) delete refer to (2.7)  
(2.9.1.4) (2.9.2) (2.9.3) delete refer to (2.9)  
(3.7.4) (3.9.4) delete refer to (3.9)  
(4.4.2)  
(4.4.5) delete located in Part 2  
(4.5.5) (5.3.5) (S5.7.5) (9.1)

**NEW INDEX- SET PRESSURE**

(1.4.5.1) (1.4.5.1.1) (2.7) (2.9) (3.9)  
(4.4.2) (4.5.5) (5.3.5) (S5.7.5) (9.1)

**SUGGESTED CHANGES- CAPACITY**

(1.4.5.1) (1.4.5.1.1) (2.4.1) (2.5.1.1) (2.5.1.3)  
(2.5.3.2) (2.5.4)  
(2.9.1.1) (2.9.1.3) (2.9.2) (2.9.3) (2.9.4) (2.9.5)  
(2.9.6) delete refer to 2.9  
(3.4.1) delete refers to fuel  
(3.4.5) doesn't exist in Part 1. It is located in Part 2  
(3.5.4) (3.7.6) (3.7.7.1) (3.7.9.1) (3.7.9.2)  
(3.9.1.1.2) (3.9.1.5) (3.9.1.6)  
(3.9.2) (3.9.3) (3.9.4) delete refer to (3.9)  
(3.9.4.3) (3.9.4.7) (3.9.5.2) (3.9.5.3)  
(4.5.1) (4.5.4) (4.5.5) (4.5.6) delete  
Refer to (4.5)  
(5.3.1) (5.3.4) (5.3.5) (5.3.6) delete refer to (5.3)  
(S2.1) (S2.2) (S2.3) (S2.4)  
(S3.6) (S2.8.1) (S2.11) (S2.15) ) (S5.3.1)  
(S5.7.4) (S5.7.5) (S5.7.6)) delete  
All covered under (S5.7)  
(S6.8) (S6.13.9) (S6.13.11.2) delete  
All are located in Part 2  
(9.1)

**NEW INDEX CAPACITY**

(1.4.5.1) (1.4.5.1.1) (2.4.1) (2.5.1.1) (2.5.1.3)  
(2.5.3.2) (2.5.4) (2.9)  
(3.5.4) (3.7.6) (3.7.7.1) (3.7.9.1) (3.7.9.2)  
(3.9.1.1.2) (3.9.1.5) (3.9.1.6) (3.9)  
(3.9.4.3) (3.9.4.7) (3.9.5.2) (3.9.5.3)  
(4.5) (5.3) (S2.1) (S2.2) (S2.3) (S2.4)  
(S3.6) (S2.8.1) (S2.11) (S2.15)  
(S5.3.3) (S5.7) (9.1)

# COMMITTEE CORRESPONDENCE

Attachment B  
Pg. 1/1

**COMMITTEE:** National Board Inspection Code  
Subcommittee Pressure Relief Devices

**ADDRESS WRITER CARE OF:**  
JAC Consulting, Inc.  
213 Park View Drive  
Belmont, NC 28012  
Phone: (704)301-8532  
E-mail: alton@jaltoncox.com

**TO:** Task Group Members

**DATE:** January 11, 2018

**SUBJECT:** N15-0310, Give Guidance as to Which Spring Chart Should be used in Repairs

Task Group Discussion:

## BACKGROUND / RATIONALE:

**NBIC PART 4, SEC 4.8.5.4, i) 3)** requires identification of the spring in a PRV during a VR Repair. However, this requirement does not specifically mention use of Manufacturer's Spring Charts. The method of determining the correct spring is a matter of interpretation of the code by the VR Holder. Spring identification during PRV Repair is critical to the proper operation of the PRV in service.

### Existing Words

The system shall include a method of controlling the repair or replacement of critical valve parts. The method of identifying each spring shall be indicated.

### Suggested Revision

The system shall include a method of controlling the repair or replacement of critical valve parts. The method of identifying each spring shall be indicated *on the repair document described in 4.8.5.4 i). Such identification shall be based on the Manufacturer's spring chart current at the time of the repair, except that the spring removed from the valve during the repair bearing different identification may be reinstalled provided the "VR" Certificate Holder has verified the spring is acceptable to the Manufacturer. Such verification shall be documented on the repair document described in 4.8.5.4 i).*

Best Regards,  
J. Alton Cox

**ITEM NB16-0401 1/10/18**

**4.7.2 REPAIR NAMEPLATE**

When a pressure relief valve is repaired, a metal repair nameplate stamped with the information required below shall be securely attached to the valve adjacent to the original manufacturer's stamping or nameplate. If not installed directly on the valve, the nameplate shall be securely attached to the valve independent of the external adjustment seals in a manner that does ~~so as~~ not ~~to~~ interfere with valve operation and sealed in accordance with the quality system.

## ITEM 17-117 Proposal 1/9/18

### Part 4, 2.2.1 GENERAL REQUIREMENTS

- a) Only direct spring loaded pressure relief valves or pilot operated pressure relief valves designed to relieve steam shall be used for steam service.
- b) Pressure relief valves are valves designed to relieve either steam or water, depending on the application.
- c) Pressure relief valves shall be manufactured in accordance with a national or international standard.
- d) Deadweight or weighted-lever pressure relief valves shall not be used.
- e) For high temperature water boilers, pressure relief valves shall have a closed bonnet, and valve bodies shall not be constructed of cast iron.
- f) Pressure relief valves with an inlet connection greater than NPS 3 (DN 80) and used for pressure greater than 15 psig (100 kPa), shall have a flanged or a welded inlet connection. The dimensions of flanges subjected to boiler pressure shall conform to the applicable standards.
- g) When a pressure relief valve is exposed to outdoor elements that may affect operation of the valve, the valve may be shielded with a cover. The cover shall be ~~properly~~-vented and arranged to permit servicing and normal operation of the valve.

### Part 1, 2.9.1 VALVE REQUIREMENTS – GENERAL

- a) Only direct spring loaded pressure relief valves or pilot operated pressure relief valves designed to relieve steam shall be used for steam service.
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- g) When a pressure relief valve is exposed to outdoor elements that may affect operation of the valve, the valve may be shielded with a cover. The cover shall be ~~properly~~-vented and arranged to permit servicing and normal operation of the valve.

- c) Pressure relief valves shall be connected to the boiler independent of any other connection without any unnecessary intervening pipe or fittings. Such intervening pipe or fittings shall not be longer than the face-to-face dimension of the corresponding tee fitting of the same diameter and pressure rating as listed in the applicable standards.

#### 2.2.4 CAPACITY

- a) The pressure relief valve capacity for each boiler shall be such that the valve or valves will discharge all the steam that can be generated by the boiler without allowing the pressure to rise more than 6% above the highest pressure at which any valve is set and in no case to more than 6% above the maximum allowable working pressure of the boiler.
- b) The minimum relieving capacity for other than electric boilers and forced-flow steam generators with no fixed steam line and waterline shall be estimated for the boiler and waterwall heating surfaces as given in Table 2.2.4.1, but in no case shall the minimum relieving capacity be less than the maximum designed steaming capacity as determined by the manufacturer.
- c) ~~The required relieving capacity in lbs/hr of the pressure relief valves on a high temperature water boiler shall be determined by dividing the maximum output in Btu at the boiler nozzle obtained by the firing of any fuel for which the unit is designed by one thousand.~~
- d) The minimum pressure relief valve relieving capacity for electric boilers shall not be less than 3.5 lbs/hr/kW (1.6 kg/hr/kW) input.
- e) If the pressure relief valve capacity cannot be computed, or if it is desirable to prove the computations, it should be checked by any one of the following methods; and if found insufficient, additional relieving capacity shall be provided:
  - 1) By performing an accumulation test, that is, by shutting off all other steam discharge outlets from the boiler and forcing the fires to the maximum. This method should not be used on a boiler with a superheater or reheater or on a high-temperature water boiler.
  - 2) By measuring the maximum amount of fuel that can be burned and computing the corresponding evaporative capacity upon the basis of the heating value of the fuel.
  - 3) By determining the maximum evaporative capacity by measuring the feedwater. The sum of the pressure relief valve capacities marked on the valves shall be equal to or greater than the maximum evaporative capacity of the boiler. This method should not be used on high-temperature water boilers.

The required relieving capacity,  $C$ , of the pressure relief valves on a high temperature water boiler shall be determined as follows:

$$C = Q/L$$

where,

$C$  = required relieving capacity in lbs/hr (kg/hr)

$Q$  = maximum output in BTU/hr (W) at the boiler nozzle obtained by the firing of any fuel for which the unit is designed

$L$  = 1000 BTU/lb (646 W·hr/kg)



in NBIC Part 1, Table 2.9.1.3, but in no case shall the minimum relieving capacity be less than the maximum designed steaming capacity as determined by the manufacturer.

- c) ~~The required relieving capacity in pounds per hour of the pressure relief valves on a high temperature water boiler shall be determined by dividing the maximum output in Btu at the boiler nozzle obtained by the firing of any fuel for which the unit is designed by one thousand.~~
- d) The minimum pressure relief valve relieving capacity for electric boilers shall not be less than 3.5 lbs/hr/kW (1.6 kg/hr/kW) input.
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NB17-120 changeover valve definition

Adam Renaldo proposed edits

1-11-18

Part 4, 2.2.10

d) No valves of any type except a changeover valve ~~as defined below~~ shall be placed between the pressure relief valves and the boiler, nor on the discharge pipe between the pressure relief valves and the atmosphere. A changeover valve, ~~which allows two redundant pressure relief valves to be installed for the purpose of changing from one pressure relief valve to the other while the boiler is operating,~~ may be used provided the changeover valve is in accordance with the original code of construction. It is recommended that the Jurisdiction be contacted to determine the acceptability of the changeover valves on boiler applications. ~~The changeover valve shall be designed such that there is no intermediate position where both pressure relief valves are isolated from the boiler.~~

Part 1, 2.9.6

d) No valves of any type except a changeover valve ~~as defined below~~ shall be placed between the pressure relief valves and the boiler, nor on the discharge pipe between the pressure relief valves and the atmosphere. A changeover valve, ~~which allows two redundant pressure relief valves to be installed for the purpose of changing from one pressure relief valve to the other while the boiler is operating,~~ may be used provided the changeover valve is in accordance with the original code of construction. It is recommended that the Jurisdiction be contacted to determine the acceptability of the changeover valves on boiler applications. ~~The changeover valve shall be designed such that there is no intermediate position where both pressure relief valves are isolated from the boiler.~~

New Glossary Term...

Changeover valve – A three-way stop (or diverter) valve with one inlet port and two outlet ports designed to isolate either one of the two outlet ports from the inlet port, but not both simultaneously during any mode of operation.