

Date Distributed:



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

NATIONAL BOARD SUBGROUP INSTALLATION

MINUTES

Meeting of January 10th, 2017
San Diego, California

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, M. Wadkinson, called the meeting to order at 8:00 a.m.

2. Introduction of Members and Visitors (Attachment Page 1)

- Introductions took place amongst all members and visitors and an attendance sheet was circulated for review and check off.
- As per an email received from T. Creacy, he will not be able to attend the meetings and that one of his fellow managers, Phil Vanvalkenburg, will be sitting in on the subgroup meeting during his absence to learn more about the overall process, etc...

With the attached roster a quorum was established. There was a motion to approve the roster as published. The motion was unanimously approved.

3. Announcements

- The National Board invites all committee members and visitors to a reception at the Quad AleHouse on Wednesday, January 11th. The event begins at 5:30 pm. The venue is approximately a five minute walk from the hotel.
- Breakfast and lunch will be provided to NBIC Committee members on Thursday.
- The draft of the 2017 edition of the NBIC has been approved by the NBIC Committee, and will be available for purchase on July 1st, 2017.
- G. Scribner reviewed changes to the policy on term limits for the appointments of Chair and Vice Chair to a Subgroup, Subcommittee, and Main committee positions.

4. Adoption of the Agenda

- As noted in the July 2016 meeting minutes, Mr. Rex Smith would like to become a member of SG Installation. At that time it was Mr. Smith's second meeting in attendance. It was noted that if he was in attendance at the meeting held in January 2017 that he would be added as wanting to become a member of the SG Installation. A vote will be taken in the SC meeting.

There was a motion to adopt the Agenda as published with the above addition. The motion was unanimously approved.

5. Approval of the Minutes of July 19th, 2016 Meeting

There was a motion to approve the Minutes of July 19, 2016 as published. The motion was unanimously approved.

6. Review of Rosters

a. Membership Nominations (Attachment Pages 2-8)

- Mr. Randy Austin and [Rex Smith](#) would like to become a member of SG Installation. Any appointment is subject to the approval of the Chairman of the Board of Trustees.

Added Mr. Rex Smith as noted under 4. Adoption of the Agenda. A vote will be taken in the SC meeting.

b. Membership Reappointments

- Mr. Don Patten, Mr. Todd Creacy, and Mr. Stanley Konopacki are eligible for reappointment to Subgroup Installation. Any appointments are subject to the approval of the Chairman of the Board of Trustees.

A vote will be taken in the SC meeting.

c. Officer Selection

- Mr. Don Patten’s appointment as SG Installation Vice Chair has expired. A vote will be held to select a SG Installation Vice Chair. Any member of the SG Installation may put their name forward for the SG Installation Vice Chair position. There is no term limit, so Mr. Patten is eligible for reappointment to this position. After the vote, the selected candidate must be appointed by the Chairman of the Board of Trustees.

A vote will be taken in the SC meeting.

7. Interpretations

| Item Number: IN16-0701 | NBIC Location: Part 1 | Attachment Pages 9-10 |
|--|------------------------------|------------------------------|
| General Description: Result of NB16-0801; Is it standard operating procedure (per NBIC) to do hydrostatic pressure tests on installed ASME Section IV boilers at 150% of the rated pressure as part of the installation inspection? | | |
| Subgroup: SG Installation | | |
| Task Group: None assigned | | |
| Meeting Action: After extensive discussions and voicing of concerns the SG makes a motion to reaffirm the Question & Reply as submitted in the July 2016 meeting to SC. The motion was unanimously approved. | | |

8. Action Items – Old Business

| Item Number: NB12-0302 | NBIC Location: Part 1 | No Attachment |
|--|------------------------------|----------------------|
| General Description: Add installation requirements for pressure vessels for human occupancy (PVHOs) | | |
| Subgroup: Installation | | |
| Task Group: B. Moore (PM), T. Creacy, T. Millette, M. Richards, G. Scribner | | |
| Meeting Action: Remove G. Scribner from the TG. A breakout session was held to further discuss the topic and its importance at hand. Mr. Richards was not present, however will be in the SC meeting so as to contribute to completing a draft for SG/SC review and comment. Nothing further to report at this time. | | |

| Item Number: NB14-0403 | NBIC Location: Part 1 | No Attachment |
|--|-----------------------|---------------|
| General Description: Identify terms from Part 1 that need to be added to the index | | |
| Subgroup: Installation | | |
| Task Group: B. Moore (PM), M. Richards, T. Creacy, M. Washington | | |
| Meeting Action: A progress report was given by B. Moore. The TG continues to review the index and will submit to Brad any changes and or additions no later than 2/10/2017. A few suggestions are to add page numbers and terms such as LWCO and Safety Relief Valves. | | |

| Item Number: NB15-0108 | NBIC Location: Part 1 | No Attachment |
|---|-----------------------|---------------|
| General Description: Add a supplement to address high temperature hot water boilers | | |
| Subgroup: Installation | | |
| Task Group: M. Wadkinson (PM) B. Moore, T. Creacy, D. Patten | | |
| Meeting Action: A progress report was given by M. Wadkinson. A breakout session was held amongst the TG. The TG suggests adding a separate supplement of High Temperature Pressure Boilers. It is suggested to be sure to include expansion tank requirements and LWCO with second tanks or tight temperature control to also be an option. | | |

| Item Number: NB16-0101 | NBIC Location: Part 1 | No Attachment |
|--|-----------------------|---------------|
| General Description: Result of NB13-1101, address carbon monoxide sensors in equipment rooms | | |
| Subgroup: Installation | | |
| Task Group: E. Wiggins (PM), G. Halley, S. Konopacki, T. Creacy, T. Millette, G. Tompkin, D. Patten , <u>B. Moore, S. Schuelke, R. Smith and M. Washington</u> | | |
| Meeting Action: A progress report was given by E. Wiggins. It was noted from the July 2016 meeting to include D. Patten on the TG, however in this meeting it was decided to remove D. Patten and add B. Moore, S. Schuelke, R. Smith and M. Washington. A breakout session was held amongst the TG discussing the high importance of this issue, its incidents, and what guidance can be proposed as to prevent such incidents. The TG continues to do research (OSHA incident reports and other locations), have discussions and generate a proposal of general wording ideas for potential starting points. R. Trout spoke to the SG about a fatality in TX along with sharing a photo. Mr. Wiggins will keep Mr. Trout informed of the progress made on this item. | | |

| Item Number: NB16-0102 | NBIC Location: Part 1 | Attachment Pages 11-13 |
|---|-----------------------|------------------------|
| General Description: Result of NB10-1201, address post installation pressure testing | | |
| Subgroup: Installation | | |
| Task Group: S. Konopacki (PM), E. Wiggins, P. Cole, R. Smith, M. Wadkinson, D. Patten | | |
| Meeting Action: S. Konopacki gave a background summary on this item. A breakout session was held amongst the TG to address and resolve the negative comments. A revised proposal was composed and presented taking all concerns into consideration. The SG makes a motion to approve the revised proposal to the SC. The motion was unanimously approved. | | |

9. Action Items – New Business

| | | |
|---|---------------------------------------|-------------------------------|
| Item Number: NB16-0104 | NBIC Location: Part 1, 3.8.1.5 | No Attachment |
| General Description: Address low water fuel cutoff requirements on vapor-system boilers | | |
| Subgroup: Installation | | |
| Task Group: None assigned M. Wadkinson (PM), B. Moore, and M. Washington | | |
| Meeting Action: A TG of M. Wadkinson (PM), B. Moore, and M. Washington was established. A progress report was presented by M. Wadkinson. It is suggested to remove “or vapor-system” from the text. The TG will hold off on working on this item until after ASME Section IV and CSD-1 meet in April 2017 to ask if they have a similar item. | | |
| Item Number: NB16-0811 | NBIC Location: Part 1 | No Attachment |
| General Description: Remove references back to general requirements section in Sections 2, 3, 4, 5, S5 | | |
| Subgroup: Installation | | |
| Task Group: None assigned M. Wadkinson (PM) and D. Patten | | |
| Meeting Action: A TG of M. Wadkinson (PM) and D. Patten was established. It was decided to address this item after the 2017 Edition is published. No progress to report at this time. | | |
| Item Number: NB16-0903 | NBIC Location: Part 1, 3.7.5.2 | Attachment Pages 14-16 |
| General Description: Add stop valves to Figure 3.7.5.2-b as required by paragraph 3.7.5.2 | | |
| Subgroup: Installation | | |
| Task Group: None assigned E. Wiggins (PM) and D. Patten | | |
| Meeting Action: A TG of E. Wiggins (PM) and D. Patten was established. A breakout session was held amongst the TG to review this item. A proposal was composed and presented to the SG. The SG makes a motion to approve the proposal to the SC. The motion was unanimously approved. | | |
| Item Number: NB16-0904 | NBIC Location: Part 1, 1.6 | Attachment Pages 17-18 |
| General Description: Define the term 'heater' used in Part 1, 1.6 | | |
| Subgroup: Installation | | |
| Task Group: None assigned D. Patten (PM), S. Konopacki, and M. Washington | | |
| Meeting Action: A TG of D. Patten (PM), S. Konopacki, and M. Washington was established. A breakout session was held amongst the TG to review this item. A proposal was composed and presented to the SG. The SG makes a motion to approve the proposal to the SC. The motion was unanimously approved. | | |

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|---|-------------------------------------|---------------------------|
| Item Number: NB16-0905 | NBIC Location: Part 1, 1.6.3 | Attachment Page 19 |
| General Description: Include other fired appliances in the fuel capacity requirement for an equipment room | | |
| Subgroup: Installation | | |
| Task Group: None assigned E. Wiggins (PM) and R. Austin | | |
| Meeting Action: A TG of E. Wiggins (PM) and R. Austin was established. A breakout session was held amongst the TG to review this item. A proposal was composed and presented to the SG. The SG makes a motion to approve the proposal to the SC. The motion was unanimously approved. | | |

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|---|---|-------------------------------|
| Item Number: NB16-2801 | NBIC Location: Part 1, Section 1 | Attachment Pages 20-24 |
| General Description: Result of PR16-0401, 0403, 0407, 0409 - scope creep requiring the use of manufacturer's recommendations/other industry standards | | |
| Subgroup: Installation | | |
| Task Group: None assigned B. Moore (PM) and R. Smith | | |
| Meeting Action: A TG of B. Moore (PM) and R. Smith was established. A breakout session was held amongst the TG to review this item so as to generate a proposal to be presented. The TG presented a summary at this time to the SG. Discussions took place. | | |

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|---|---|-------------------------------|
| Item Number: NB16-2802 | NBIC Location: Part 1, Section 1 | Attachment Pages 25-28 |
| General Description: Result of PR16-0406, 0409, 0416; possible contradiction in requirements for compliance with "environmental requirements" | | |
| Subgroup: Installation | | |
| Task Group: None assigned D. Patten (PM), S. Konopacki, M. Wadkinson, and E. Wiggins | | |
| Meeting Action: A TG of D. Patten (PM), S. Konopacki, M. Wadkinson, and E. Wiggins was established. A breakout session was held amongst the TG to review this item so as to generate a proposal to be presented. The TG presented a summary at this time to the SG. Discussions took place. | | |

| | | |
|---|---------------------------------------|---------------------------|
| Item Number: NB16-2803 | NBIC Location: Part 1, 2.5.3.2 | Attachment Page 29 |
| General Description: Result of PR16-0410, add requirements that remote emergency shutdown switches should not be retroactively installed | | |
| Subgroup: Installation | | |
| Task Group: None assigned R. Smith (PM), B. Moore, , P. Schulke, and M. Washington | | |
| Meeting Action: A TG of R. Smith (PM), B. Moore, P. Schulke, and M. Washington was established. A breakout session was held amongst the TG to review this item. It was determined that further follow-up was needed. The TG presented a summary at this time to the SG. | | |

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|---|--|---------------------------|
| Item Number: NB16-2804 | NBIC Location: Part 1, 2.7.5 p) | Attachment Page 30 |
| General Description: Result of PR16-0411, remove mandatory reference of NB-27, Guide for Blowoff Vessels | | |
| Subgroup: Installation | | |
| Task Group: None assigned E. Wiggins (PM), B. Moore, D. Patten, and M. Washington | | |
| Meeting Action: A TG of E. Wiggins (PM), B. Moore, D. Patten, and M. Washington was established. A breakout session was held amongst the TG to review this item. It was decided to address this item after the 2017 Edition is published. No progress to report at this time. | | |

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|--|---------------------------------------|---------------------------|
| Item Number: NB16-2805 | NBIC Location: Part 1, 3.8.1.5 | Attachment Page 31 |
| General Description: Result of PR16-0412, clarify requirements for vapor system boilers | | |
| Subgroup: Installation | | |
| Task Group: None assigned M. Wadkinson (PM), B. Moore, and M. Washington | | |
| Meeting Action: A TG of M. Wadkinson (PM), B. Moore, and M. Washington was established. A progress report was presented by M. Wadkinson. Section IV and CSD-1 will be contacted to open an item to address the recommendation of deleting these words. | | |

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|--|---------------------------------------|---------------------------|
| Item Number: NB16-2806 | NBIC Location: Part 1, S6.1 b) | Attachment Page 32 |
| General Description: Result of PR16-0415, delete references to building codes because this is beyond the knowledge of an inservice inspector | | |
| Subgroup: Installation | | |
| Task Group: None assigned E. Wiggins (PM) and S. Konopacki | | |
| Meeting Action: A TG of E. Wiggins (PM) and S. Konopacki was established. A motion was made to delay TG work until after the 2017 Edition is published. The motion was unanimously approved. | | |

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|--|------------------------------------|-------------------------------|
| Item Number: NB16-2807 | NBIC Location: Part 1, S6.4 | Attachment Pages 33-34 |
| General Description: Result of PR16-0417, rewrite section to clarify that it is guidance for owners or users, not requirements for inspectors | | |
| Subgroup: Installation | | |
| Task Group: None assigned D. Patten (PM) and M. Washington | | |
| Meeting Action: A TG of D. Patten (PM) and M. Washington was established. A motion was made to delay TG work until after the 2017 Edition is published. The motion was unanimously approved. | | |

10. Future Meetings

July 17-20, 2017 – Columbus, Ohio

January 8-11, 2018 – Location TBD

11. Adjournment

A motion was made and unanimously approved to adjourn the meeting at 3:04 p.m.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jeanne Bock". The signature is stylized with a large, sweeping initial "J" and "B".

Jeanne Bock

NBIC Part 1 Installation Secretary

SG Installation Attendance Sheet - 1/10/17

| Name | Company | Phone Number | Email | Signature | Attend Rec.? | Guest? |
|-----------------------|----------------------------------|------------------|---|-----------|--------------|--------|
| Melissa Wadkinson | Fulton Thermal | (315) 298-7112 | melissa.wadkinson@fulton.com | | ✓ | |
| Don Patten | Bay City Boiler | (510) 786-3711 | dpatten@baycityboiler.com | | ✓ | |
| Jeanne Bock | National Board | (614) 431-3233 | jbock@nationalboard.org | | ✓ | |
| Todd Creacy | Zurich Services Corporation | | todd.creacy@zurichna.com | | | |
| Geoffrey Halley | ABMA | (636) 394-3483 | ghalley@aol.com | | ✓ | |
| Stanley Konopacki | NRG Energy | (630) 771-7956 | stanley.konopacki@nrgenergy.com nrg.com | | ✓ | |
| Joseph Millette | UAB | (205) 975-4091 | jmillett@uab.edu | | | |
| Brian Moore | Hartford Steam Boiler | (860) 722-5657 | brian.moore@hsb.com | | | |
| Mike Richards | Southern Company | (205) 992-7111 | hmichaelrichards.pe@gmail.com | | | |
| Paul Schuelke | Weil-McLain | (219) 879-6561 | pschuelke@weil-mclain.com | | ✓ | |
| Milton Washington | State of New Jersey | (609) 292-2345 | milton.washington@dol.nj.gov | | ✓ | |
| Edward Wiggins | Liberty Mutual | (256) 357-2825 | edward.wiggins@libertymutual.com | | ✓ | |
| Joe Brockman | State of Missouri | 573 751-8708 | Joe.Brockman@dhs.dps.mo.gov | | ✓ | |
| Brian Moore | HSB | 860 722-5657 | brian.moore@hsb.com | | ✓ | |
| Randy Austin | STATE OF ARIZONA | 602-542 1648 | RANDY.AUSTIN@AZDOSSH.GOV | | | |
| Philip Van Valkenburg | Zurich | 559-299- 5514 | PHILIP.VAN.VALKENBURG@ZURICHNA.COM | | ✓ | |
| MIKE VOGEL | STATE OF ILLINOIS | 217-725 7595 | mike.vogel@illinois.gov | | ✓ | |
| REX SMITH | AUTHORIZED INSPECTOR ASSOCIATION | 281-751 1150 | RSMITHE@AIAALLC-ORG | | ✓ | |
| Matthew Sansone | NYS | 585 303 1316 | matthew.sansone@labor.ny.gov | | ✓ | ✓ |
| | | | | | | |
| | | | | | | |

Randall D. Austin

800 W. Washington St.
Phoenix, Arizona 85007
(602) 542-1648
randy.austin@azdosh.gov

Qualifications

National Board Commissioned Boiler Inspector, IS & AI Commission # 10798

Endorsements "R" & "B"

"IS" - Inservice Inspector

"AI" - Authorized Inspector

"B" - Inspector Supervisor

"R" - Repair Inspector (NBIC)

National Board Team Leader, Certificate # 247

Qualified to review Quality Control Management Systems on companies for the repair, alteration & Owner-User Inspector Organizations for boilers and pressure vessels on behalf of The National Board of Boiler & Pressure Vessel Inspectors.

Permit-Required Confined Space Entry Certified, OSHA Course #2264

Education

Graduated Heritage High School, Littleton CO – 1974

U.S. Navy, Boiler Technician "A" School for 1200 psi Boilers, Great Lakes, IL – 1975 (160 hours)

U.S. Navy, 1200 psi Boiler Operation, San Diego, CA – 1977 (120 hours)

U.S. Navy, Automatic Boiler Control Systems (Hagen, Bailey & General Regulator Controls), San Diego, CA -1977 (80 hours)

U.S. Navy, 1200 psi Pressure "P" Fired Boiler School, Philadelphia, PA – 1978 (200 hours)

Hartford Steam Boiler, National Board Preparation Course, Chicago, IL – 1988 (144 hours)

National Board of Boiler & Pressure Vessel Inspectors Supervisors Course, Columbus, OH – 1992 (80 hours)

National Board of Boiler & Pressure Vessel Inspectors / A.S.M.E. Team Leader Course, Columbus, OH – 2004 (24 hours)

United States Department of Labor, OSHA Training Institute, Golden, CO – 2007 (40 hours)

Relevant Experience

- U.S. Navy Boiler Technician 1975 – 1980, (Honorable Discharge).
- Boiler Inspector for The State of Colorado, Department of Labor & Employment, Boiler Inspection Branch 1980 - 2002.
- Chief Boiler Inspector (Director) for The State of Colorado, Department of Labor & Employment, Oil & Public Safety, Boiler Inspection Branch 2002 - 2008.
- Chief Boiler Inspector for The State of Arizona, Industrial Commission, Arizona Department of Safety and Health, Boiler Safety Section 2007 - present.

Other Experience

- Member of The National Board of Boiler and Pressure Vessel Inspectors, 2002 - present.
- Appointed by The State of Colorado as the representative member to The American Society of Mechanical Engineers (A.S.M.E.) Boiler & Pressure Vessel Conference Committee 2002 – 2008.
- Appointed by The State of Arizona as the representative member to The American Society of Mechanical Engineers (A.S.M.E.) Boiler & Pressure Vessel Conference Committee 2008 – present.
- Committee member of The American Society of Mechanical Engineers, Controls and Safety Devices for Automatically Fired Boilers (A.S.M.E. CSD-1) 2005 – present.
- Committee member of The American Society of Mechanical Engineers, Power Piping (ASME B31.1) 2010 – 2015.
- Technical Panel Member of UL834, Standard for Heating, Water Supply, and Power Boilers – Electric, Underwriters Laboratories 2011 – present.
- Member of Peer Review Board, The National Board of Boiler and Pressure Vessel Inspectors, 2016 - present.
- Colorado Army National Guard from 1980 -1989, Rank Staff Sergeant, Crew Chief 8” Self Propelled Howitzer. Three (3) years as trainer for COANG Leader Ship Development Course (Basic, Primary and Advanced), (Honorable Discharge).



AUTHORIZED INSPECTION ASSOCIATES, LLC

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February 9, 2016

National Board of Boiler and
Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, Ohio 43229

Attn: Brad Besserman

Subject: Request for membership on Subgroup and Subcommittee on Installation

Dear Mr. Besserman,

Rob Troutt introduced us at the meeting in Corpus Christi, and I wanted to follow up with you regarding membership on the Subgroup / Subcommittee. I would like to offer my time to both, and I will make a commitment to attendance at all meetings, and to work hard toward the objectives of the Subgroup / Subcommittee. Please let me know if I can provide any further information helpful to you, the Subcommittee or the Subgroup.

Best regards,

A handwritten signature in black ink, appearing to read 'Rex Martin Smith', written in a cursive style.

Rex Martin Smith, Manager

CURRICULUM VITAE

1. **Family Name:** Smith
2. **First Name:** Rex
3. **Date of Birth:** 09NOV1961
4. **Civil Status:** Divorced
5. **Nationality:** USA
6. **Education:** As below

| | |
|------------------------|--|
| Date (from,to): | 1988 - 1994 |
| Institution: | University of Massachusettes, Texas A & M University |
| Degree/Diploma: | 100 Credits towards BA in Political Science |

7. **Language Skills:**

| Language | Reading | Speaking | Writing |
|----------|---------|----------|---------|
| English | 5 | 5 | 5 |
| Spanish | 2 | 1 | 1 |

Marked 1 to 5 for competence, 1: very basic, 5: mother language level

8. **Years of experience:** 30 years
9. **Present Position:** Manager
Company / reg. Business : Authorized Inspection Associates, LLC

10. Key Qualifications: Technical Competence (details/ key , see below)

| | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| A | A | A | A | A | A | A | B | A | A | A | - | - | - | B | - |

| | |
|---|---|
| Inspection related experience (-A- : long term experience > 3 years, -B- : short term <3 years) | |
| 01-04 | Fabrication Inspections, experience & qualification : details see below |
| 05 | In-process inspection and on-site inspection of steam boilers and components (e.g. power stations) |
| 06 | In-process inspection & on-site inspection of pressure vessels (e.g. chemical plants, oil/gas plant, etc.) |
| 07 | In-process inspection & on-site inspection of piping |
| 08 | In-process inspection & on-site inspection of machinery (e.g. turbines, compressors, conveying systems) |
| 09 | Installation inspections for Boilers (ASME Sections I and IV) |
| 10 | Quality inspection of technical components, acceptance tests, performance tests |
| 11 | Expediting |
| 12 | Inspection of electrical installations & electrical equipment (e.g. transformers, switchboards) |
| 13,14 | Inspection of electrical instrumentation, Inspection of electrical control systems (e.g. power stations, etc) |
| 15 | Health and Safety related requirements |
| 16 | System Auditor (ISO 9001 / TS 29001) Audits |

| | | |
|-------------------------------------|---|---|
| 01 | Experience / Qualification codes or standards: (Authorization by Inspection Agency : see attachment) | |
| QLF. | Exp. | QLF = Qualification Exp = Experience (experience min 3 years; no certification /authorisation) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Pressure Equipment Directive 97/23/EC |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Transportable Pressure Equipment Directive 99/36/EC |
| <input checked="" type="checkbox"/> | - | ASME authorized inspector Commission No.: 10618 |
| - | <input checked="" type="checkbox"/> | ASME related experience |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | API : API-Monogram, API 1104, API 607 (ISO10497) |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | In-Service Boiler/Installation Inspections (ASME I and IV) |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | AS1210, AS 4458, AS 4041, AS4037, AS3992, AS4343, Australia Worksave OHS Reg. |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | New Zealand DoH, / OSH – PECPR Regulations |

| | | | | | |
|-----------|---------------------------|------------------------------|------------------------------|--|---|
| 02 | Welding Experience | EWE <input type="checkbox"/> | IWE <input type="checkbox"/> | ASME <input checked="" type="checkbox"/> | AWS <input checked="" type="checkbox"/> |
| | Years of experience | > 25 years | | | |

| | | | | | | | | |
|-----------|--------------------------|----|----|----|----|----|----|----|
| 03 | NDT Qualification | AT | ET | MT | PT | RT | UT | VT |
| | NONE | - | - | - | - | - | - | - |
| | | - | - | - | - | - | - | - |

| | |
|-----------|---|
| 04 | Material Testing |
| | <input checked="" type="checkbox"/> Conduct / Verify / Witness of mechanical & technological testing at material manufacturer, or external laboratory |
| | <input type="checkbox"/> Metallography (experience in assessment of macros/micros and of structures of metallic materials) |

11. Key Qualifications: Experience

| | |
|---------------------------|--|
| Date (from, to): | December 2014 to Present |
| Company, Location: | Authorized Inspection Associates, LLC Houston, Texas |
| Position: | Manager |
| Description: | ASME and NB Accredited Authorized Inspection Agency Manager. Responsible for AIA compliance with ASME QAI-1, NB-360, NB-369 and ISO/IEC 17020. Also responsible for technical and administrative supervision of all personnel. |

| | |
|---------------------------|--|
| Date (from, to): | December 2000 to December 2013 |
| Company, Location: | TUV Rheinland AIA Services, LLC Houston, Texas |
| Position: | Manager |
| Description: | ASME and NB Accredited Authorized Inspection Agency Manager. Responsible for AIA compliance with ASME QAI-1, NB-360, NB-369 and ISO/IEC 17020. Also responsible for technical and administrative supervision of all personnel. |

| | |
|---------------------------|---|
| Date (from, to): | June 1992 to December 2000 |
| Company, Location: | Factory Mutual Insurance Company Houston, Texas |
| Position : | Authorized Inspector / Authorized Inspector Supervisor |
| Description: | In-service inspection of boilers in Texas and Louisiana, and new construction inspection of boilers and pressure vessels. Technical supervision of boiler and pressure vessel Inspectors. |

| | |
|---------------------------|---|
| Date (from, to): | June 1987 to June 1992 |
| Company, Location: | Hartford Steam Boiler Inspection and Insurance Company (Boston Office and Atlanta Office) |
| Position : | Boiler Inspector |
| Description: | Performed In-service / New Installation inspections in Massachusetts, New Hampshire, Maine, Vermont, Rhode Island, Virginia and North Carolina. Also performed boiler and pressure vessel inspections for US Air Force, Army, Navy, White House, NEOB, OEOB and USPS. |

12. Professional Training / Special Recognition:

| Date (from, to) | Description: |
|------------------------|---|
| July 1987 | National Board Inspector Commission |
| August 1999 | National Board Inspector Supervisor |
| June 2005 | National Board Nuclear Inspector |
| December 2006 | National Board Nuclear Inspector Supervisor |

13. Miscellaneous:

While currently only doing in-service boiler and pressure vessel inspections in Texas, I have previously held commissions in many states, and completed over 5000 in-service inspections.

Houston, Texas 08FEB16

Place, Date



Signature

This Curriculum Vitae shall be handled confidentially.

| | | |
|---|------------------------------|----------------------|
| Item Number: NB16-0801 | NBIC Location: Part 1 | No Attachment |
| General Description: Is it standard operating procedure (per NBIC) to do hydrostatic pressure tests on installed ASME Section IV boilers at 150% of the rated pressure as part of the installation inspection? | | |

Question:

If a pressure test has been performed and documented on the applicable Manufacturer's Data Report for a boiler, pressure vessel or piping, is an additional pressure test required prior to initial operation?

Reply:

NO

Interpretation IN16-0701

Proposed Interpretation

| | |
|------------------------------|--|
| Inquiry: | IN16-0701 |
| Source: | NB16-0801 |
| Subject: | Pressure Testing - Part 1 |
| Edition: | 2015 NBIC |
| Question 1: | Is it standard operating procedure (per NBIC) to do hydrostatic pressure tests on installed ASME Section IV boilers at 150% of the rated pressure as part of the installation inspection? |
| Reply 1: | |
| Committee's Question: | If a pressure test has been performed and documented on the applicable Manufacturer's Data Report for a boiler, pressure vessel or piping, is an additional pressure test required prior to initial operation? |
| Committee's Reply: | No |
| Rationale: | 2.10.2 Power Boilers, 3.10.1 Heating Boilers, 4.6 Pressure Vessels, 5.4 Piping It is not the intent of the code to mandate post construction testing at 150% of the rated pressure. |
| SC Vote | Passed – Unanimous |
| NBIC Vote | |

2.10.2 PRESSURE TEST

Prior to initial operation, the completed boiler, including pressure piping, water columns, superheaters, economizers, stop valves, etc., shall be pressure tested in accordance with the original code of construction. Any pressure piping and fittings such as water columns, blowoff valves, feedwater regulators, superheaters, economizers, stop valves, etc., which are shipped connected to the boiler as a unit, shall be hydrostatically tested with the boiler and witnessed by an Inspector.

3.10.1 PRESSURE TEST

Prior to initial operation, the completed boiler, individual module, or assembled module, shall be subjected to a pressure test in accordance with the requirements of the original code of construction.

4.6 TESTING AND ACCEPTANCE

a) The installer shall exercise care during installation to prevent loose weld material, welding rods, small tools, and miscellaneous scrap metal from getting into the vessel. The installer shall inspect the interior of the vessel and its appurtenances where possible prior to making the final closures for the presence of foreign debris.

b) The completed pressure vessel shall be pressure tested in the shop or in the field in accordance with the original code of construction. When required by the Jurisdiction, owner or user, the Inspector shall witness the pressure test of the completed installation, including piping to the pressure gage, pressure relief device, and, if present, level control devices.

5.4 EXAMINATION, INSPECTION, AND TESTING

The owner shall ensure that all examinations, inspections, and tests required by the code of construction have been performed prior to operation.

NB16-0102

Action Item Request Form**8.2 CODE REVISIONS OR ADDITIONS**

Request for Code revisions or additions shall provide the following:

a) Proposed Revisions or Additions

For revisions, identify the rules of the Code that require revision and submit a copy of the appropriate rules as they appear in the Code, marked up with the proposed revision. For additions, provide the recommended wording referenced to the existing Code rules.

Existing Text:

2.10.2 PRESSURE TEST

Prior to initial operation, the completed boiler, including pressure piping, water columns, superheaters, economizers, stop valves, etc., shall be pressure tested in accordance with the original code of construction. Any pressure piping and fittings such as water columns, blowoff valves, feedwater regulators, superheaters, economizers, stop valves, etc., which are shipped connected to the boiler as a unit, shall be hydrostatically tested with the boiler and witnessed by an Inspector.

2.10.4 SYSTEM TESTING

Prior to final acceptance, an operational test shall be performed on the complete installation. The test data shall be recorded and the data made available to the jurisdictional authorities as evidence that the installation complies with the provisions of the governing code(s) of construction. This operational test may be used as the final acceptance of the unit.

3.10.1 PRESSURE TEST

Prior to initial operation, the completed boiler, individual module, or assembled module, shall be subjected to a pressure test in accordance with the requirements of the original code of construction.

4.6 TESTING AND ACCEPTANCE

a) The installer shall exercise care during installation to prevent loose weld material, welding rods, small tools, and miscellaneous scrap metal from getting into the vessel. The installer shall inspect the interior of the vessel and its appurtenances where possible prior to making the final closures for the presence of foreign debris.

b) The completed pressure vessel shall be pressure tested in the shop or in the field in accordance with the original code of construction. When required by the Jurisdiction, owner or user, the Inspector shall witness the pressure test of the completed installation, including piping to the pressure gage, pressure relief device, and, if present, level control devices.

4.7.6 TESTING AND ACCEPTANCE

Testing and acceptance shall be in accordance with NBIC Part 1, 4.6

NB16-0102

b) Statement of Need

Provide a brief explanation of the need for the revision or addition.

NB10-1201 Covered reformatting multiple items. Pressure Testing was inconsistent between the three sections and really needs to be addressed

c) Background Information

Provide background information to support the revision or addition, including any data or changes in technology that form the basis for the request that will allow the Committee to adequately evaluate the proposed revision or addition. Sketches, tables, figures, and graphs should be submitted as appropriate.

When applicable, identify any pertinent paragraph in the Code that would be affected by the revision or addition and identify paragraphs in the Code that reference the paragraphs that are to be revised or added.

N/A

Proposed Wording:**1.?? TESTING AND ACCEPTANCE**

a) The completed boiler/ pressure vessel shall be pressure tested in the shop and/or in the field in accordance with the original code of construction.

b) The installer shall exercise care during installation to prevent loose weld material, welding rods, small tools, and miscellaneous scrap metal from getting into the vessel. Prior to making the final closure the installer shall inspect the interior of the vessel and its appurtenances where possible prior to making the final closures for the presence of foreign debris.

c) Subject to the jurisdictional requirements, Prior to final acceptance, an operational pressure test, with the approval of the jurisdiction if required, shall may be performed on any components who's whose pressure test is not documented under the items' Manufacturer's Data Report. This pressure test should not exceed 90% of the lowest pressure relief device setpoint. The test data shall be recorded and the data made available as required. This operational test may be used as the final acceptance of the unit.

NB16-0102

Comments for Ballot: NB16-01-02

Welch,Paul

voted: **Approve** 10/19/2016 1:50:39 PM

I recommend approval with a minor change to the proposed wording in para b. second sentence to read: Prior to final acceptance, an operational test, with the approval of the Jurisdiction, shall be performed...

Pillow,James

voted: **Approve** 10/6/2016 8:00:39 AM

I approve the proposal, but suggest a minor editorial change in last sentence of first paragraph as follows. Prior to making the final closures, the installer shall inspect the interior of the vessel and its appurtenances where possible for the presence of foreign debris.

Webb,Michael

voted: **Disapprove** 10/5/2016 3:01:27 PM

At this time, I will vote to "disapprove" this item. My understanding of this action item was to: generally consolidate the pressure testing requirements of the various Part 1, Sections into a more general practice to be described in Part 1, Section 1-General Guidelines. In my read whether intended or my misunderstanding, the product of the SC-Installation effort may have offered the ASME code-required pressure testing to be circumvented as presented in the SC-proposed paragraph "b)". To add, I would propose for consideration the item as presented in the attachment or otherwise presented be inserted as: Part 1, Section 1, 1.4.1 b) with the current 1.4.1 b) re-introduced to become 1.4.1 c). As a note to the attachment: the text in red represents the text implying the operational test may satisfy final acceptance of the unit.—M. Webb, 10-5-16

Reference Document: [NB16-0102-letter ballot Part 1 Section 1 G. Guidelines proposed 1.4.1. b. 10-5-16.pdf](#)

Troutt,Robby

voted: **Disapprove** 10/5/2016 8:09:44 AM

My disapproval is based on the lack of reference to a jurisdictional inspection prior to the operational test in paragraph (b). Some jurisdictions do not allow an operational test prior to the initial inspection.

Sekely,Jim

voted: **Approve** 10/3/2016 1:07:21 PM

1.?? b): Change who's to whose

NB16-0903

Action Item Request Form

12/1/2016

Request for Code revision:

a) Proposed Revisions or Additions

Existing Text: **NBIC PART 1 2015**

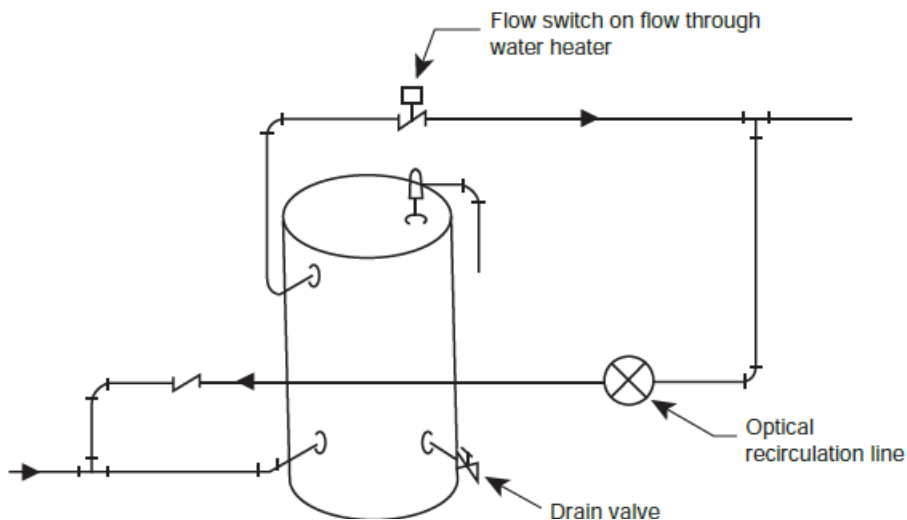
2015 | NATIONAL BOARD INSPECTION CODE

3.7.5.2 POTABLE WATER HEATERS

Stop valves shall be installed in the supply and discharge pipe connections of a water heater installation to permit draining the water heater without emptying the system. See NBIC Part 1, Figures 3.7.5.2-a and 3.7.5.2-b.

FIGURE 3.7.5.2-b

FLOW THROUGH PORTABLE WATER HEATER WITHOUT PROVISION FOR PIPING EXPANSION—ACCEPTABLE PIPING INSTALLATION.



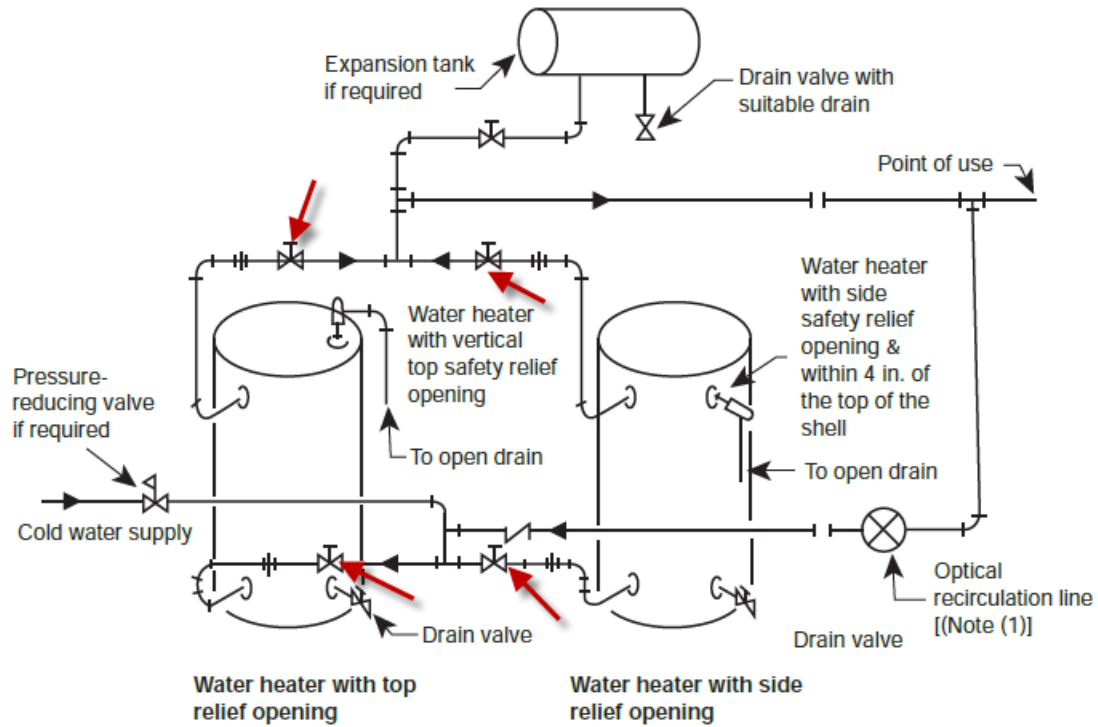
b) Provide a brief explanation of the need for the revision or addition.

In the figure 3.7.5.2-b there are no stop valves shown on the supply and return piping as is stated in paragraph 3.7.5.2.

NB16-0903

c) Background Information

The valves are shown in figure 3.7.5.2-a

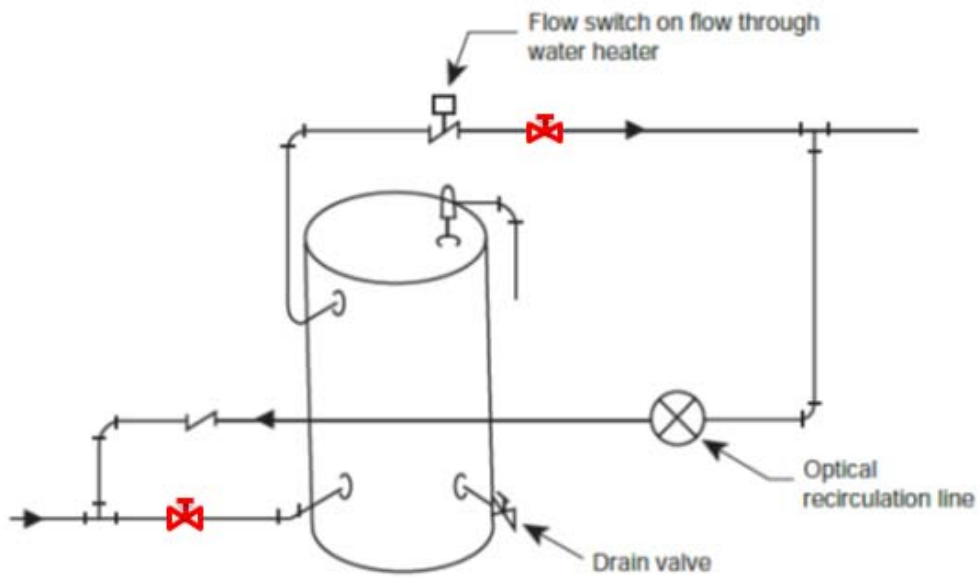
FIGURE 3.7.5.2-a**STORAGE POTABLE WATER HEATERS IN BATTERY – ACCEPTABLE PIPING INSTALLATION**

d) Consider adding the valves to the supply and return to figure 3.7.5.2-b as stated in paragraph 3.7.5.2

William Vallance
Senior Staff Engineer
The National Board
614 888 8320 ext. 409

Portable Potable

FIGURE 3.7.5.2-b
FLOW THROUGH PORTABLE WATER HEATER WITHOUT PROVISION FOR PIPING
EXPANSION—ACCEPTABLE PIPING INSTALLATION.



NB16-0904

Action Item Request Form

12/8/2016

Request for Code revision:

a) Proposed Revisions or Additions

Existing Text: **NBIC PART 1 2017 Approved Draft**

| | |
|----------------------------|---|
| NB10-1201 Part 1, 1.6 | <p><u>1.6 GENERAL REQUIREMENTS</u></p> <p><u>The following are general requirements for the boilers, heaters and pressure vessels covered in NBIC Part 1, Section 2, NBIC Part 1 Section 3, NBIC Part 1 Section 4, and NBIC Part 1 Supplement 5. Refer to each referenced section for additional requirements specific to the type of equipment covered by each section.</u></p> |
| NB10-1201 Part 1, 1.6.1 | <p><u>1.6.1 SUPPORTS, FOUNDATIONS, AND SETTINGS</u></p> <p><u>Each boiler, heater, vessel and its associated piping must be safely supported. Design of supports, foundations, and settings shall consider vibration (including seismic where necessary), movement (including thermal expansion and contraction), and loadings (including the weight of the fluid in the system during a pressure test) in accordance with jurisdictional requirement, manufactures recommendations.</u></p> |

b) Statement of Need

In the 2017 General Requirements the term is used "heater" in various paragraphs when there is no explanation of what type of heater this term is for.

c) Background Information

To be able to explain this term to perspective IS commissioned inspectors or owner/users would be difficult if we were to assume its meaning without code wording.

d) I would suggest stating in each paragraph what heaters the text is for such as, potable water heater, superheater, or thermal fluid heaters.

William Vallance
Senior Staff Engineer
The National Board
614 888 8320 ext. 409

NB16-0904

Task Group – Response

1.6 GENERAL REQUIREMENTS

The following are general requirements for the boilers, potable water heaters, thermal fluid heaters and pressure vessels covered in NBIC Part 1, Section 2, NBIC Part 1 Section 3, NBIC Part 1 Section 4, and NBIC Part 1 Supplement 5. Refer to each referenced section for additional requirements specific to the type of equipment covered by each section.

1.6.1 SUPPORTS, FOUNDATIONS, AND SETTINGS

Each boiler, potable water heater, thermal fluid heater and pressure vessel and ~~its the~~ associated piping must be safely supported. Design of supports, foundations, and settings shall consider vibration (including seismic where necessary), movement (including thermal expansion and contraction), and loadings (including the weight of the fluid in the system during a pressure test) in accordance with jurisdictional requirement, manufactures recommendations, and/or other industry standards, as applicable.

NB16-0905

a) Proposed Revisions or Additions

Existing Text: **NBIC PART 1 2017 Approved Draft**

1.6.3

Two means of exit shall be provided for equipment rooms exceeding 500 sq. ft. (46.5 sq. m) of floor area and containing one or more boilers having a combined fuel capacity of 1,000,000 Btu/hr (293 kW) or more (or equivalent electrical heat input). Each elevation shall be provided with at least two means of exit, each to be remotely located from each other. A platform at top of a single boiler, heater, vessel is not considered an elevation.

b) Statement of Need

Need is to bring a fired appliance such as a potable water heater into the combined fuel capacity for the equipment room.

c) Proposed Changes

1.6.3

Two means of exit shall be provided for equipment rooms exceeding 500 sq. ft. (46.5 sq. m) of floor area and containing one or more boilers, potable water heaters, thermal fluid heaters and pressure vessels having a combined fuel capacity of 1,000,000 Btu/hr (293 kW) or more (or equivalent electrical heat input). Each elevation shall be provided with at least two means of exit, each to be remotely located from each other. A platform at the top of a single boiler, potable water heater, thermal fluid heater and pressure vessel is not considered an elevation.

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Comments Must be Received No Later Than: October 10, 2016

Instructions: If unable to submit electronically, please print this form and fax or mail. Print or type clearly.

Date: September 19, 2016

Commenter Name: Brian W. Moore

Commenter Address: Hartford Steam Boiler, One State Street
P.O. Box 5024, Hartford, CT 06102-5024

Commenter Phone: 860-722-5657

Commenter Fax: 860-722-5530

Commenter Email: brian_moore@hsb.com

Section/Subsection Referenced: Part 1 Section 1.6.1

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

Including the phrase "manufacturer's recommendations, and/or other industry standards, as applicable" is scope creep and beyond the knowledge and training of boiler inspectors. Structure standards should not be directly or indirectly made part of the "requirements" in Part 1. An in-service inspector has no way of verifying the requirements of other unspecified standards.

Delete the phrase noted above.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

Submit Form To: Bradley Besserman, NBIC Secretary, The National Board of Boiler & Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus, OH 43229, email: bbesserman@nationalboard.org

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Commenter Email: brian_moore@hsb.com

Section/Subsection Referenced: Part 1 Section 1.6.2 a

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

Including subparagraph b) "manufacturer's recommendations, and/or other industry standards, as applicable" is scope creep and beyond the knowledge and training of boiler inspectors. Structure standards should not be directly or indirectly made part of the "requirements" in Part 1.

Delete the phrase noted above.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Section/Subsection Referenced: Part 1 Section 1.6.5a

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

Including the phrase "manufacturer's recommendations, and/or other industry standards, as applicable" is scope creep and beyond the knowledge and training of boiler inspectors. Structure standards should not be directly or indirectly made part of the "requirements" in Part 1. An in-service inspector has no way of verifying the requirements of other unspecified standards, such as Building Codes, Mechanical Codes, Fire Codes, or Electrical Codes.

Delete the phrase ", and/or other industry standards, as applicable" .

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Section/Subsection Referenced: Part 1 Section 1.6.8

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

See attached comments.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Part 1 Section 1.6.8

The proposed subparagraph 1.6.8 directly contradicts subparagraph 1.4.1 with regard to "environmental requirements".

Subparagraph 1.6.8 reads: "Chimneys or stacks shall be installed in accordance with jurisdictional and environmental requirements, manufacturer's recommendations, and/or industry standards, as applicable."

Subparagraph 1.4.1 reads: "Unless otherwise specifically required by the Jurisdiction, the duties of the inservice inspector do not include the installation's compliance to other standards and requirements (e.g., environmental..."

Delete reference to "environmental requirements"

=====

Also delete the phrase ", and/or industry standards, as applicable."

Including the phrase "manufacturer's recommendations, and/or other industry standards, as applicable" is scope creep and beyond the knowledge and training of boiler inspectors. Structure standards should not be directly or indirectly made part of the "requirements" in Part 1. An in-service inspector has no way of verifying the requirements of other unspecified standards, such as Building Codes, Mechanical Codes, Fire Codes, or Electrical Codes.

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Commenter Email: brian_moore@hsb.com

Section/Subsection Referenced: Part 1 Section 1.6.5

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

The proposed subparagraph 1.6.5 directly contradicts subparagraph 1.4.1 with regard to "environmental requirements".
Subparagraph 1.6.5 reads: " All fuel systems shall be installed in accordance with jurisdictional and environmental requirements, manufacturer's recommendations, and/or industry standards, as applicable."
Subparagraph 1.4.1 reads: "Unless otherwise specifically required by the Jurisdiction, the duties of the inservice inspector do not include the installation's compliance to other standards and requirements (e.g., environmental..."

Delete reference to "environmental requirements"

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Section/Subsection Referenced: Part 1 Section 1.6.8

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

See attached comments.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Part 1 Section 1.6.8

The proposed subparagraph 1.6.8 directly contradicts subparagraph 1.4.1 with regard to "environmental requirements".

Subparagraph 1.6.8 reads: "Chimneys or stacks shall be installed in accordance with jurisdictional and environmental requirements, manufacturer's recommendations, and/or industry standards, as applicable."

Subparagraph 1.4.1 reads: "Unless otherwise specifically required by the Jurisdiction, the duties of the inservice inspector do not include the installation's compliance to other standards and requirements (e.g., environmental..."

Delete reference to "environmental requirements"

=====

Also delete the phrase ", and/or industry standards, as applicable."

Including the phrase "manufacturer's recommendations, and/or other industry standards, as applicable" is scope creep and beyond the knowledge and training of boiler inspectors. Structure standards should not be directly or indirectly made part of the "requirements" in Part 1. An in-service inspector has no way of verifying the requirements of other unspecified standards, such as Building Codes, Mechanical Codes, Fire Codes, or Electrical Codes.

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Commenter Fax: 860-722-5530

Commenter Email: brian_moore@hsb.com

Section/Subsection Referenced: Part 1 Part 1, Supplement 6.2

Comment/Recommendation: Proposed Solution: [] New Text [] Revise Text [x] Delete Text

The proposed subparagraph S6.2 directly contradicts subparagraph 1.4.1 with regard to "environmental requirements".
S6.2 reads: The allowable operating parameters of the combustion air intake and the exhaust gas venting shall be in accordance with jurisdictional, environmental and manufacturers recommendations, as applicable
Subparagraph 1.4.1 reads: "Unless otherwise specifically required by the Jurisdiction, the duties of the inservice inspector do not include the installation's compliance to other standards and requirements (e.g., environmental..."
Delete reference to "environmental requirements"

Source: [x] Own Experience/Idea [] Other Source/Article/Code/Standard

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Commenter Phone: 860-722-5657

Commenter Fax: 860-722-5530

Commenter Email: brian_moore@hsb.com

Section/Subsection Referenced: Part 1 Section 2.5.3.2

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

In place of the deleted text in subparagraph d) add the following:

d) Remote emergency shutdown switches shall not be retroactively installed.

Rationale: In my experience, the electricians who retroactively install such switches do not understand boiler safety limit controls. Too many claims and near misses occur when a control is retroactively installed by unqualified individuals. In addition, tapping into the controls on some older boilers could even be hazardous since the controls were probably not designed to handle that circuit. Such switches should only be addressed in new installations.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Commenter Email: brian_moore@hsb.com

Section/Subsection Referenced: Part 1 Section 2.7.5 p)

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

NB-23 NBIC is an ANSI accredited consensus standard. However, NB-27 is not. I do not think this paragraph meets ANSI Essential Requirements by making the paragraph mandatory. There has been no public review or comment on NB-27.

Change text as follows to meet ANSI Essential Requirements:
p) Boiler blowoff systems may be constructed as recommended in the Guide for Blowoff Vessels (NB-27), which can be found on the National Board website, www.nationalboard.org.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Comments Must be Received No Later Than: October 10, 2016

Instructions: If unable to submit electronically, please print this form and fax or mail. Print or type clearly.

Date: September 19, 2016

Commenter Name: Brian W. Moore

Commenter Address: Hartford Steam Boiler, One State Street
P.O. Box 5024, Hartford, CT 06102-5024

Commenter Phone: 860-722-5657

Commenter Fax: 860-722-5530

Commenter Email: brian_moore@hsb.com

Section/Subsection Referenced: Part 1 Section 3.8.1.5

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

Change "water" to "fluid" in "...a) Each automatically fired steam or vapor-system boiler shall have an automatic low-water fuel cutoff so located as to automatically cut off the fuel supply when the surface of the water falls to..."

Delete: "...or vapor-system..."

Rationale: This is the only location within this paragraph that uses this term "vapor-system boiler". Including thermal fluid heaters, other types of vaporizing boilers contain a fluid other than water.
See also Comment Part 1, 2.8.5.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

Submit Form To: Bradley Besserman, NBIC Secretary, The National Board of Boiler & Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus, OH 43229, email: bbesserman@nationalboard.org

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Commenter No. Issued: _____ Project Committee Referred To: _____

Comment No. Issued: _____

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Section/Subsection Referenced: Part 1 Part 1, Supplement 6.1b)

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

"b) This supplement is based on Local, State or National Building Codes requiring the installation of a Carbon Monoxide (CO) detector/alarm in the boiler room."

Delete this text.

Rationale: Building Codes, Mechanical Codes, Electric Codes, etc are beyond the knowledge and training of in-service boiler inspectors and are the providence of building officials. This is scope creep beyond what in-service boiler inspectors should be responsible.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Section/Subsection Referenced: Part 1 Part 1, Supplement 6.4

Comment/Recommendation: *Proposed Solution:* New Text Revise Text Delete Text

The entire S6.4 addresses requirements that represent scope creep beyond the knowledge and training of in-service boiler inspectors. The information is, however, good guidance for installers and owners. In-service inspectors have no way judge the adequacy of S6.4 provisions.

Rewrite the section to make it clear to jurisdictional authorities that the section is the responsibility of the owner and installer.

See attached suggestion.

Source: Own Experience/Idea Other Source/Article/Code/Standard _____

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Part 1

S6.4 FLUE GAS VENTING SYSTEM PIPING ~~REQUIREMENTS~~RECOMMENDATIONS

~~ea)~~ This supplement ~~requires~~recommends that the owner/user/installer contact the authority having ~~Jurisdiction~~jurisdiction regarding the installation of carbon monoxide (CO) detector/alarm in boiler rooms in which condensing boilers are to be installed

~~ab)~~ The vent piping ~~shall~~should be corrosion resistant and fabricated from either stainless alloy or plastic material as defined by the boiler manufacturer and certified for the application.

~~bc)~~ The diameter of the vent piping ~~shall~~should be as defined by the boiler manufacturer and ~~shall~~should not be reduced, except as allowed by the boiler manufacturer.

~~ed)~~ The "Total Equivalent Length" of the vent piping, and the pressure drop through the vent piping, ~~shall~~should not exceed that stated in the Boiler Manufacturer's Installation Manual. (Note: Equivalent Length includes the pressure loss effect of various pipe fittings, such as elbows, etc.) Horizontal pipe runs ~~shall~~should slope toward the boiler and the condensate collection point.

~~ee)~~ The termination point of the vent piping ~~shall~~should be positioned such that there is no possibility of vented flue gas being entrained in the combustion air intake, as defined by the manufacturer and National Fuel Gas Code (ANSI Z223.1). Additionally the vent termination ~~shall~~should be located above the highest known snowline for the location involved, and be designed in such a manner, so as to prevent freezing.

~~e) This supplement requires the owner/user/installer contact the authority having Jurisdiction regarding the installation of carbon monoxide (CO) detector/alarm in boiler rooms in which condensing boilers are to be installed.~~