



Date Distributed: October 30, 2014

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

## **SUBCOMMITTEE INSPECTION**

### *MINUTES*

---

*Meeting of October 20, 2014  
Columbus, Ohio*

*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 – 2:30 p.m.**

Chairman Mark Mooney called the meeting to order at 2:30 p.m.

## **2. Roster**

Mr. Gary Scribner took roll call and a quorum was verified.

## **3. Announcements**

Mr. Scribner briefly explained the layout of the agenda and how the comments were grouped by commenter and type. The editorial comments will be voted on in these groups. The substantive comments will be voted on individually.

## **4. Adoption of the Agenda**

There was a motion to approve the agenda. The motion was unanimously approved.

## **5. Part 2 Editorial PR Comments (Commenter Name: Alex Garbolevsky)**

### **PR15-0307 - Part 2, 4.4.8.7 f) 3)**

The SI conversion of “(3200 sq. mm)” should be corrected to “(32000 sq. mm)”.

### **PR15-0309 – Part 2, S2.10.4.2 c) 3)**

Show an SI conversion for the “(1-inch)” parenthetical reference.

### **PR15-0310 – Part 2, S11.10**

I could not find the definition of the abbreviation AE (for acoustic emission).  
(I did a word search for the entire draft text.)

### **PR15-0311 – Part 2, S11.10.4 b)**

The value of “0.5 inches” should be metricated to 13 mm.

### **PR15-0312 - Part 2 – S11.10.4 c)**

- (1) The units for energy (U) and impedance (Z) should be given for the integral expression
- (2) In the 3<sup>rd</sup> paragraph, “FFT” is used without explanation or definition

### **PR15-0313 - Part 2 – S11.10.4 f)**

For the equation to solve for “U”, units for “U” (assumed to be joules, J), “N” (assumed to be “cycles” or “Hz”), “T” (seconds?) and “Z” (impedance) are not provided.

### **PR15-0314 - Part 2 – S11.10.4 g)**

“24 inches” and “2 feet” are used in the text. I recommend “2 feet” (with accompanying SI value) be used for consistency.

### **PR15-0315 - Part 2 – S11.10.5**

Substitute “in.” as the abbreviation for inches rather than quotation marks (“). Also, the value of 24 inches should be metricated.

### **PR15-0316 - Part 2 – S11.10.6**

Inch values listed in the first paragraph are converted to “cm”. For consistency, the unit should be “mm”.

### **PR15-0317 - Part 2 – S11.10.8 b)**

In the equation for “UFB”, the numeral “1” is shown after the term “A”. The numeral “1” should actually be

a lower case letter “l”. We also need to know the units for “A”, “l”, “E”, and “ε” so that “UFB” can be expressed in joules (J).

[NOTE: The letters “FB” above should be subscript]

**PR15-0318 - Part 2 – S11.10.8 c)**

In the equation shown for “UFB”, the numeral “1” is shown after the term “A”. The numeral “1” should actually be a lower case “l”. We also need to know the units for “A”, “l”, “E”, and “ε” so that “UFB” can be expressed in joules (J). In addition, in the example calculation, it is stated that “ $A = \pi d^2/4$  and  $l = 4d$ ”; however, no consistent units are given for “d”. It appears from the example that “d” is 7μm (micrometers), but when the value is plugged into the formula it is shown as “7(10-6)”, in which case the value is expressed as “meters”.

[NOTE: FB in the above description should be a subscript. Also “7(10-6)” is meant as “7 times 10 exp -6”]

Mr. Mooney went through each of Mr. Garbolevsky’s comments individually. There was a motion to respond to Mr. Garbolevsky’s comments as “Approve, changes are incorporated” The motion was unanimously approved.

**6. Part 2 Editorial PR Comments (Commenter Name: Nathan Carter)**

**PR15-0153 - Part 2 – 4.4.8.7 f)**

Line 2) . Replace “inches” with “in.” to be consistent.

Line 3) . “3200 sq. mm” should be “32000 sq. mm”.

**PR15-0155 - Part 2 – S1.4.2.8.1**

Row 3. Replace “1/4” with “1/4 in.” to be consistent. Also include metric equivalent.

**PR15-0144 - Part 2 – S9.3 b)1) and d) and e)1)**

b)1). Change “assure” to “ensure”

d)1). Change “assure” to “ensure”

d)2). Change “Data Report” to “Manufacturer’s Data Report”

e)1). Change “assure” to “ensure”

**PR15-0145 - Part 2 – S10.6**

Seventh row. Capitalize “figure”.

**PR15-0146 - Part 2 – S10.7 b)**

Second Row. Is “tank” intended to be written as “vessel”?

“Tank” is also used in “a)2)”, “c”, “c)1)”, and the first column in each of the Table S10 (a&b imperial and metric).

**PR15-0151 - Part 2 – S11.10.7 b)2)**

Superscript the “-10”

**PR15-0152 - Part 2 – Table S11.7 a (note 1) and Table 1b (note 1)**

Change “ASME data report” to “Manufacturer’s Data Report”.

Mr. Mooney went through each of Mr. Carter’s comments individually. There was a motion to respond to Mr. Carter’s comments as “Approve, changes are incorporated” The motion was unanimously approved.

**7. Part 2 Substantive PR Comments**

**PR15-0204 - Part 2 – 2.3.6.8 (Brian Moore)**

Do not incorporate the proposed change – Establishing a mandatory (shall) inspection requirement based

on another inspection code is beyond the scope of the NBIC. To my knowledge, no other inspection code has ever been made mandatory under the NBIC. If inspection requirements are needed then one of two things should be done: 1) let individual jurisdictions set the requirements, or 2) within the NBIC include specific inspection requirements consistent with pressure vessels constructed to ASME Section VIII and ASME PVHO-1. An alternative to including specific requirements within the NBIC would be to change the text to: "Inspections may be conducted using ASME PVHO-2 for reference." It must be clear that the requirements of PVHO-2 are not a mandatory part of an NBIC inspection. See for example, PVHO-2 Section 4.0. None of the responsibilities listed include a commissioned boiler inspector. Even Section 7 states that there are various types of inspections. "Operational Inspections" are definitely beyond the scope and capabilities of a commissioned inspector.

There was a motion to approve responding to Mr. Moore with resolution #2, "Accept in Principle, a new action item will be opened." The motion was approved with two disapproved votes.

**PR15-0142 - Part 2 - S7.10 h) (Nathan Carter)**

Since a nameplate is required with a "R" stamp for the underground service change, was the requirement for an R-1/R-2 to be completed intentionally left off? Would it not be prudent for an Inspector to verify that the seal welding or flush patch welds comply at least visually comply with code? A "R" Certificate Holder is already required. Why not include an Inspector to verify the weld is acceptable and require a signed R-1/R-2 form, which is to be filed with the NB. There is a risk to life/property if a seal weld or flush patch on a LPG storage vessel is not completed in accordance with code requirements. Paragraph e) also introduces additional welding, which should be verified. Also please consider a new item for Part 3, which would refer the reader to this Supplement for a Change of Service.

There was a motion to approve responding to Mr. Carter with resolution #2, "Accept in principle a new action item will be opened." The motion was approved with an abstention and one disapproved vote.

**PR15-0143 - Part 2 - S7.10 k) (Nathan Carter)**

Part k) is silent concerning qualified welders. I don't believe the intent is for unqualified welders to be seal welding or welding flush patches to close off unused connections (d)) as well as welding the nameplate, especially since a qualified WPS is required. Consider requiring that the welder be qualified as specified in NBIC Part 3 2.2.3. Also, Consider providing more guidance to "stamp holder using a qualified welding procedure" by pointing the reader to Part 3. Consider changing this to "stamp holder using a qualified WPS or SWPS as specified in NBIC Part 3 2.2.1 and 2.2.2 respectfully."

There was a motion to approve responding to Mr. Carter with resolution #2, "Accept in principle, a new action item will be opened. The motion was unanimously approved.

**PR15-0601 - Part 2 – 2.3.6.8 (Kenneth Stoller)**

While AIA supports the concepts underlying PVHO-2, we oppose its adoption as an in-service inspection standard. The requirements of PVHO-2 are addressed to owner/operators, not inspectors, and go well beyond the normal scope and training of National Board Commissioned Inspectors. Imposing these requirements on special inspectors may also place them in the untenable position of assuming liability beyond the limits of the insurance policies under which they perform inspections. Accordingly, we recommend leaving this section un-amended.

There was a motion to approve replying to Mr. Stoller with resolution #2, "Accept in principle, a new action item will be opened." The motion was approved with one disapproved vote.

**PR15-0401 - Part 2 – 2.3.6.8 (Robert Wielgoszinski)**

Inspections that are specified by the NBIC should be performed in accordance with the NBIC, and not be performed to other Codes or Standards. The specific details for inspection should be extracted from the standard and written into the NBIC. This places the NBIC in control of which inspections they need performed. This paragraph should be withheld from publication in the NBIC until revised to specify the inspections needed.

There was a motion to approve replying to Mr. Wielgoszinski with resolution #2, “Accept in principle, a new action item will be opened. The motion was approved with one disapproved vote.

**PR15-0602 - Part 2 – S10 (Kenneth Stoller)**

AIA believes that several aspects of the proposed requirements are either undefined or otherwise beyond the normal scope and training of National Board Commissioned Inspectors. Imposing these requirements on Special Inspectors may also place them in the untenable position of assuming liability beyond the limits of the insurance policies under which they perform inspections. Items of concern include the failure to define the terms “sufficient clearance” (S10.2b), “safely supported” (S10.2d), “guarded (S10.2f); and “permanent” (S10.3a). We recommend either defining or deleting these terms. Furthermore, Commissioned Inspectors are not qualified to (i) determine whether a CO2 detector is set to alarm at any particular concentration (S10.5); (ii) verify the posting of warning signs and determine the setpoint of any alarms (S10.6); or (iii) determine the length of safety relief/vent lines or verify that the materials selected for valves, piping, tubing, hoses and fittings used in the LCDSV system meet certain requirements. We recommend deleting these sections.

There was a motion to approve responding to Mr. Stoller with a resolution #2, “Accept in principle, a new action item will be opened.” The motion was unanimously approved.

**PR15-0402 - Part 2 – S10 (Robert Wielgoszinski)**

Much of Supplement 10 contains requirements for inspection of equipment or systems that are outside the scope of the insurance policies that insurance company’s issue. If these inspections are mandated by the Jurisdiction, then the inspectors employed by these insurance companies will be forced to make inspections in where they have no business interest. Further, this puts indefensible liability on the Inspector and his/her employer. I recommend either deleting this Supplement from the 2015 edition and rework it to be more guidance related then requirement based, or add a suitable disclaimer in the Scope paragraph, S10.1, that would exempt Inspector conformance to this supplement if carbon dioxide systems or parts thereof, are not within the employer’s scope of activity.

There was a motion to approve responding to Mr. Wielgoszinski with a resolution #2, Accept in principle, a new action item will be opened. The motion was approved with one disapproved from Mr. Barker.

**PR15-0205 - Part 2 – S10.2 b) (Brian Moore)**

Delete S10.2 b) This is unenforceable language and beyond the scope of knowledge of a National Board Commissioned inspector. The word “sufficient” is undefined and beyond the knowledge of a commissioned inspector to determine.

There was a motion to approve responding to Mr. Moore with a resolution #2, “Accept in principle, a new action item will be opened. The motion was unanimously approved.

**PR15-0206 - Part 2 – S10.2 d) (Brian Moore)**

Delete S10.2 b) This is unenforceable language and beyond the scope of knowledge of a National Board Commissioned inspector. The expression “safely supported” is undefined and beyond the knowledge of a commissioned inspector to determine. If “safely supported” means chained to the wall with a lock, then this subparagraph should so state, otherwise there can be no uniform and consistent interpretation of “safety supported”.

There was a motion to approve responding to Mr. Moore with resolution #2, “Accept in principle, a new action item will be opened. The motion was unanimously approved.

**PR15-0207 - Part 2 – S10.2 f) (Brian Moore)**

Delete S10.2 b) This is unenforceable language and beyond the scope of knowledge of a National Board Commissioned inspector. The word “guarded” is undefined and beyond the knowledge of a commissioned

inspector to determine. If “guarded” means a 6” diameter steel pipe, filled with concrete, and buried 3’ onto the ground, then this subparagraph should so state, otherwise there can be no uniform and consistent interpretation of “guarded”.

There was a motion to approve responding to Mr. Moore with resolution #2, “Accept in principle, a new action item will be opened. The motion was unanimously approved.

**PR15-0208 - Part 2 – S10.3 a) (Brian Moore)**

Delete S10.3 a) This is unenforceable language and beyond the scope of knowledge of a National Board Commissioned inspector. The word “permanent” is undefined and beyond the knowledge of a commissioned inspector to determine. There can be no uniform and consistent interpretation of “permanent.”

There was a motion to respond to Mr. Moore with resolution #2, “Accept in principle, a new action item will be opened.” The motion was unanimously approved.

**PR15-0209 - Part 2 – S10.5 (Brian Moore)**

National Board Commissioned inspectors do not inspect to NIOSH or ACGIH documents. It is not appropriate to cite these as mandatory, which is how this subparagraph will be interpreted. Commissioned inspectors are not qualified to determine whether a detector is set to alarm at any particular concentration.

There was a motion to respond to Mr. Moore with resolution #2, “Accept in principle, a new action item will be opened.” The motion was unanimously approved.

**PR15-0210 - Part 2 – S10.6 (Brian Moore)**

Delete S10.6. Verifying signage is beyond what in-service commissioned inspectors are chartered to do. Such signage is within the purview of OSHA for a safe work environment for employees. Commissioned in-service inspectors do inspect to any requirements of OSHA. In addition, the in-service inspectors are not qualified to determine the setpoint of any alarms. This entire section should be deleted.

There was a motion to respond to Mr. Moore with resolution #2, “Accept in principle, a new action item will be opened.” The motion was unanimously approved.

**PR15-0211 - Part 2 – S10.7 (Brian Moore)**

Delete S10.7. The materials specifications are beyond what a commissioned in-service can verify. Valves, piping, tubing, and fittings may not be visibly marked for such verification. Further, the inspector cannot verify S10.7 a)3) "...the working pressure of the applicable circuit in the system..." The caution is not enforceable language for an inspector: "Caution: Company's and or individuals filling or refilling LCDSV's shall be responsible for utilizing fill equipment that is acceptable to the manufacturer to prevent over pressurization of the vessel." In S10.7 d) the length of a vent line cannot be reasonably determined by an in-service inspect. Tracing a line with a tape measure to determine its length is not practical or reasonable. Finally, the tables reference a "Fire Flow Rate" which is a manufacturer/user determined rating under Section VIII. This entire section, including the tables, should be deleted.

There was a motion to respond to Mr. Moore with resolution #2, “Accept in principle, a new action item will be opened.” The motion was unanimously approved.

**PR15-0701 - Part 2 – S11.10.2 (Nathan Carter)**

S11.10 specifies very complex, details throughout. Would it not be prudent for the Examiner to prepare a written procedure capturing all of the requirements in S11.10 as well as addressing all of the requirements in ASME Section V, Article 11? Would it also be prudent to require this procedure to be demonstrated to the Inspector also or at a minimum require that the procedure be available for review by the Inspector during his/her inspection cycle?

There was a motion to respond to Mr. Carter with resolution #2, “Accept in principle, a new action item

will be opened.” The motion was unanimously approved.

**PR15-0702 - Part 2 – S11.10.2 and S11.10.6 (Nathan Carter)**

The Title “Test Procedure” is used in both Sections S11.10.2 and S11.10.6 under S11.10 Acoustic Emission Examination. Was it the intent to have “Test Procedure” listed twice for Acoustic Emission? If not, suggest that these two paragraphs be consolidated. The latter is more detailed than the former.

There was a motion to respond to Mr. Carter with resolution #2, “Accept in principle, a new action item will be opened.” The motion was unanimously approved.

**PR15-0703 - Part 2 – S11.10.3 (Nathan Carter)**

Which Edition of SNT-TC-1A and CP-189? Is any acceptable that addresses Acoustic Emission Examination?

Last Sentence: How is the training and experience quantified? To who’s satisfaction? How is this training and experience documented? I assume that the intent is that considerable training and experience be performed and not a 5 minute training session and one examination interval be performed. Without quantifying this, what is there to prevent this from occurring?

There was a motion to respond to Mr. Carter with resolution #2, “Accept in principle, a new action item will be opened.” The motion was unanimously approved.

**8. Part 2 Rejected PR Comments**

**PR15-0319 - Part 2 – S1.4.2.8.1 (Alex Garbolevsky)**

Correct the word “radiuses” to “radii”.

There was a motion to respond to Mr. Garbolevsky with resolution #4, “Rejected for the following reason: Rejected for the following reason – “No change suggested. The words “radiuses” and “radii” do not appear in this text.” The motion was unanimously approved to reject this comment.

**PR15-0308 – Part 2, S2.6.3.3 (Alex Garbolevsky)**

Show US Customary Units (i.e., 3.00 in., 2.00 in., 7.50 in.) as well as SI Units of 75 mm, 50 mm, and 187.5 (or 188?) mm, respectively.

There was a motion to respond to Mr. Garbolevsky with resolution #4, “Rejected for the following reason: No recommendation possible – the comment is ambiguous. The motion was unanimously approved.

**PR15-0212 - Part 2 – S10 (Brian Moore)**

Lack of transparency – there is no clear and transparent trail from the Subcommittee Inspection agendas and minutes the Jan 2014 or July 2015 meetings showing how this supplement was transformed from a paragraph 2.3.6.8 in the body to a supplement. There are to Subcommittee items addressing the text to the entirety of the new Supplement (NB14-1905 and NB13-0801). There is no evidence tying these two items to a final ballot on the complete text. And finally, there is no evidence that the Main Committee voted on the complete Supplement as shown in the proposed draft.

There was a motion to respond to Mr. Moore with resolution #4, “Rejected for the following reason: This does not contain a comment that proposes revisions to the document and requested documentation will be provide to the commenter.” The motion was unanimously approved.

**PR15-0320 - Part 2 – S10.1 (Alex Garbolevsky)**

(1) The term “PH” should be corrected to “pH”.

(2) The chemical symbol for carbon dioxide should be corrected from “CO2” to “CO[subscript 2]”.

There was a motion to respond to Mr. Garbolevsky with resolution #4, “Rejected for the following reason -

No change required; public review already matches suggested changes.” The motion was unanimously approved.

**PR15-0704 - Part 2 – S11.6, S11.7, S11.9 (Nathan Carter)**

The Term “Examination” is used throughout S11.6, S11.7, and S11.9. Was this intended to read “Inspection” instead, which is a duty of the Inspector?

There was a motion to respond to Mr. Carter with resolution #2, “Accept in principle, a new action item will be opened.” The motion was unanimously approved.

**PR15-0321 - Part 2 – S11.10.8 (Alex Garbolevsky)**

Does “F” (the acoustic emission allowance factor) have units? Its value is shown as  $10^{-4}$ . [10 exp -4]

There was a motion to respond to Mr. Garbolevsky with resolution #4, “Rejected for the following reason, No change suggested. F is a unitless quantity.” The motion was unanimously approved.

**9. New Business**

**10. Future Meetings**

January 19-23, 2015, Orlando, Florida  
July 21-24, 2015, Columbus, Ohio

**11. Adjournment**

Chairman Mooney adjourned the meeting at 5:34 p.m.

Respectfully Submitted,  
Robin Hough  
:rh

*G:\Part 2\Part 2 Inspection - Minutes - October 2014.doc*