

Date Distributed:



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

NATIONAL BOARD SUBCOMMITTEE INSPECTION

MINUTES

Meeting of July 14th, 2021
Cincinnati, OH

*These minutes are subject to approval and are for the committee use only.
They are not to be duplicated or quoted for other than committee use.*

The National Board of Boiler & Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, Ohio 43229-1183
Phone: (614)888-8320
FAX: (614)847-1828

1. Call to Order

Chairman, Jim Getter, called the meeting to order at 8:03 am.

2. Introduction of Members and Visitors

Secretary, Jodi Metzmaier, took a roll call for all members and visitors, both in person and on Zoom. All members stated “here”, and all visitors stated their name and their company/interest. The members and visitors are listed on the attendance sheet (**Attachment page 1**).

3. Check for a Quorum

With the members in attendance, both in person and remotely, a quorum was established.

4. Awards/Special Recognition

Jodi Metzmaier presented David Buechel with a 5 Years of Service pin.

5. Announcements

Jodi Metzmaier made the announcements to the Subcommittee. (**Attachment pages 2-3**).

6. Adoption of the Agenda

Prior to the adoption of the agenda, the below items were added. A motion was made to adopt the agenda as revised. The motion was seconded, and unanimously approved.

- Add Joseph Morgan & Jerry Jessick as a Member nominees for both Subgroup and Subcommittee.
- Add item 21-34

7. Approval of the Minutes of the January 13, 2021 Meeting

A motion was made to approve the minutes from January 13, 2021 Subcommittee Inspection meeting. The motion was seconded and **unanimously approved**.

8. Review of Rosters

a. Membership Nominations

Mr. William Hackworth (Arise - Authorized Inspection Agencies) is interested in becoming a member of Subgroup & Subcommittee Inspection.

Mr. Joseph Morgan (User) is interested in becoming a member of Subgroup & Subcommittee Inspection (Resume is on the Cloud, he attended the July 2020 meetings for Subgroup & Subcommittee, and the Subgroup meeting in January 2020).

Mr. Jerry Jessick (User) is interested in becoming a member of Subgroup & Subcommittee Inspection (Resume is on the Cloud)

Mr. Hackworth, Mr. Jessick, and Mr. Morgan all spoke to the group explaining how they would each be an asset to the Subgroup & Subcommittee Inspection groups. The group asked the nominees questions, and the nominees left the room for discussion.

During discussion Mr. Welch stated he will be stepping down as a member of Subgroup & Subcommittee Inspection.

After discussion, a motion was made to accept all three nominees to become members of both Subgroup & Subcommittee Inspection. The motion was seconded and **unanimously approved**.

b. Membership Reappointments

The following Subgroup Inspection members are up for reappointment: Mr. Darrell Graf, Mr. Jim Getter, Mr. James Calvert, Mr. Mark Horbaczewski, and Mr. John Mangas. Their memberships are set to expire on August 30, 2021.

All Subgroup members were voted to be reappointed at the Subgroup meeting. A motion was made to reappoint all members. The motion was seconded and **unanimously approved**.

The following Subcommittee Inspection members are up for reappointment: Mr. Jim Getter, Mr. James Calvert, Mr. Mark Horbaczewski, and Mr. John Mangas. Their memberships are set to expire on August 30, 2021.

All Subcommittee members would like to remain on the committee. A motion was made to reappoint all members. The motion was seconded and **unanimously approved**.

c. Officer Appointments

Mr. Jim Getter’s and Mr. Mark Horbaczewski’s terms as Chair and Vice Chair are set to end on August 30, 2021. They are both eligible for reappointment to these positions.

Both the Chair and Vice Chair have stated they would like to run for reappointed. There were no other nominations. A motion was made to reappoint Mr. Getter as Chair and Mr. Horbaczewski as Vice Chair. Motion was seconded and **unanimously approved**.

9. Open PRD Items Related to Inspection - There were no open PRD items related to Inspection.

10. Interpretations - There were no interpretations for Subcommittee Inspection.

11. Action Items

Item Number: NB16-1402	NBIC Location: Part 2, New Supplement	No Attachment
General Description: Life extension for high pressure FRP vessels above 20 years		
Subgroup: FRP		
Task Group: M. Gorman (PM)		
July 2021 Meeting:		
PROGRESS REPORT: Mr. Bernie Shelley from the FRP task group addressed the Subcommittee stating the proposal has been brought back to the FRP TG for further work. They are hoping to have a new proposal in the fall and then if it passes it will come to Subcommittee Inspection in January 2022.		

Item Number: 18-6	NBIC Location: Part 2, S1.4.2.9	No Attachment
General Description: Riveted stay bolt dimensions		
Subgroup: Locomotive		
Task Group: M. Janssen (PM)		
July 2021 Action:		
No action was taken on this item as it has already passed through Subcommittee letter ballot and is now ready to be proposed to the MC.		

Item Number: 18-43	NBIC Location: Part 2, Section 5	Attachment Pages 4-6
General Description: Permanent nameplate removal from pressure vessel being removed from service		
Subgroup: Inspection		
Task Group: J. Roberts (PM), J. Burgess, J. Calvert, J. Clark, M. Sansone		
July 2021 Action:		
The document that was revised and approved by Subgroup Inspection was reviewed by the Subcommittee. A motion was made to accept the proposal. The motion was seconded and unanimously approved.		

Item Number: 18-63	NBIC Location: Part 2	Attachment Page 7
General Description: Review inspection requirements for pressure vessels designed for high pressures		
Subgroup: Inspection		
Task Group: V. Scarcella (PM), J. Mangas, J. Peterson, B. Ray and J. Castle		
July 2021 Action:		
This item was sent to LB for review and comment to the Subcommittee. A motion was made to move the proposal forward as presented. The motion was seconded and unanimously approved.		

Item Number: 19-46	NBIC Location: Part 2, S5	No Attachment
General Description: Revisions to Yankee dryer supplement in Part 2 (Scope)		
Subgroup: Inspection		
Task Group: T. Barker (PM), V. Newton, D. Lesage		
Explanation of Need: Ensure that wording in Part 2, S5.1, is identical to that found in Part 1, S1.1.		
July 2021 Action:		
<p>PROGRESS REPORT: Mr. Newton has given an update for this item. He also stated he would like to close out items 19-63 & 19-64 with no action and incorporated everything into this item. The General Description of this item will be changed to Revisions to Yankee dryer supplement in Part 2. Mr. Jessick also stated that there are about 10 people working on this item and they are meeting twice a week to try and get everything ready for a proposal. Gary Scribner has asked that we are notified of all of the people working on this item. This information was emailed to the NBIC Secretary.</p>		
TASK GROUP: Add Jerry Jessick		

Item Number: 19-63	NBIC Location: Part 2, S5.2	No Attachment
General Description: Changes to the Yankee Dryer Supplement (ASSESSMENT OF INSTALLATION)		
Subgroup: Inspection		
Task Group: T. Barker (PM), V. Newton, D. Lesage		
Explanation of Need: Ensure that wording in Part 2, S5.2, is identical to that found in Part 1, S1.2. Note that wording will be the same, but paragraph numberings will be different.		
July 2021 Action:		
<p>A motion was made to close this item and incorporate it into Item 19-46. The motion was seconded and unanimously approved.</p>		

Item Number: 19-64	NBIC Location: Part 2, S5.2.1	No Attachment
General Description: Changes to the Yankee Dryer Supplement (DETERMINATION OF ALLOWABLE OPERATING PARAMETERS)		
Subgroup: Inspection		
Task Group: T. Barker (PM), V. Newton, D. LeSage		
Explanation of Need: Ensure that wording in Part 2, S5.2.1, is identical to that found in Part 1, S1.3. Note that wording will be the same, but paragraph numberings will be different.		
July 2021 Action:		
<p>A motion was made to close this item and incorporate it into Item 19-46. The motion was seconded and unanimously approved.</p>		

Item Number: 19-84	NBIC Location: Part 2, S2.10.7	Attachment Pages 8-9
General Description: Inspecting riveted joints for failure		
Subgroup: SG Historical		
Task Group: F. Johnson (PM), M. Wahl, Robert Underwood, & Chris Jowett		
Explanation of Need: The text covers cracks parallel to a longitudinal joint, but there is no text covering inspection of plate material around a rivet.		
July 2021 Action:		
Mr. Getter discussed the proposal passed through the TG Historical group. After review of the proposal, a motion was made to accept the proposal as presented. The motion was seconded and unanimously approved .		

Item Number: 20-5	NBIC Location: Part 2, 4.1 – 4.4	No Attachment
General Description: Add language in NBIC Pt2/Pt3 to minimize CSEs by allowing remote NDE.		
Subgroup: Inspection		
Task Group: V. Newton (PM), J. Morgan, M. Horbaczewski, D. Graf, D. LeSage, D. Rose, B. Ray		
Explanation of Need: In order to minimize higher-risk work, specifically Confined Space Entries, remote NDE methodologies should be specifically allowed by the NBIC, at the discretion of the people performing the inspections.		
July 2021 Action:		
Mr. Newton spoke on this item. He explained that the item was voted to be closed with no action in the Subgroup meeting. Mr. Morgan stated he was the one who originally submitted this item, he then stated after having discussions with some of the Subcommittee members, he was ok with backing off this item and closing it with no action. The Subcommittee had some further discussion, and a motion was made to close this item with no action . The motion was seconded and unanimously approved .		

Item Number: 20-26	NBIC Location: Part 2, S2	No Attachment
General Description: Concern for Historical Boiler Inspections Nationwide		
Subgroup: Historical		
Task Group: T. Dillon (PM), R. Underwood, L. Moedinger, M. Wahl, D. Rupert, K. Anderson, M. Sansone & J. Wolf		
Explanation of Need: Currently Jurisdictions are not uniform in adoption of how and when inspections are performed.		
July 2021 Action:		
PROGRESS REPORT: Mr. Getter stated the Historical task group is still working on exactly what can be done for education for inspections of historical boilers. Mr. Sansone will bring this topic up at the next BOT meeting as well.		

Item Number: 20-46	NBIC Location: Part 2, 5.3.2	No Attachment
General Description: Updates to Forms NB-5, NB-6, & NB-7		
Subgroup: Inspection		
Task Group: D. Buechel (PM), M. Sansone, V. Scarcella, D. LeSage		
Explanation of Need: On the current forms NB-5, NB-6, & NB-7 there are fields that are already on the ASME Manufactures Data Report making them repetitive. Other fields that ask for in- depth technical information would be hard if not impossible for an inspector to determine and are irrelevant to the inspection process.		
July 2021 Action:		
PROGRESS REPORT: Mr. Buechel stated the TG met after the Subgroup Inspection meeting, and they are still working to create a proposal. They are trying to get something together for Mr. LeSage and Mr. Sansone to take to the JRS meeting. Mr. Sansone will also speak with the other Jurisdictions to see what else they require.		

Item Number: 20-57	NBIC Location: Part 2, 4.4.1 a)	No Attachment
General Description: Evaluate revision to Part 2, 4.4 FFS Scope roles and responsibilities (submitted by Mr. George Galanes).		
Subgroup: Inspection		
Task Group: M. Horbaczewski (PM) and B. Ray.		
Explanation of Need: Currently, there is confusion surrounding implementation of FFS for Part 2 inspection activities, where the FFS form is located and Part 3 activities regarding Part 3, 3.3.4.8 because it references Part 2 for FFS. In addition, we need to have a Part 2 Inspection member to be assigned to assist in the development of roles and responsibilities.		
July 2021 Action:		
PROGRESS REPORT: Mr. Horbaczewski discussed this item with the group. The document is still a work in progress. The TG is waiting on a document from EPRI & ASME before they make any further revision to their proposal.		

Item Number: 20-59	NBIC Location: Part 2, 5.2.1 a)	No Attachment
General Description: Temporary nameplate removal for external inspection (submitted by Mr. Doug Biggar).		
Subgroup: Inspection		
Task Group: T. Vandini (PM), B. Ray, J. Roberts, V. Newton, M. Sansone		
Explanation of Need: What is being added to NBIC part 2 (item 19-30) for NBIC 2021 edition: [(e) removal and re-attachment of the original manufacturer's nameplate shall only be done in accordance with NBIC Part 3, 5.11]. To have an inspector present onsite each time we need to have a nameplate temporarily removed has a cost that a commercial refurbisher such as ourselves would need to pass onto the customer as well as dramatically affect the efficiency of our assembly line.		
July 2021 Action:		
Mr. Vandini met with the TG after the Subgroup Inspection meeting. The proposal was revised and presented to Subcommittee Inspection for a vote. The group discussed the proposal, and a motion was made to send the proposal to Subcommittee letter ballot . The motion was seconded and unanimously approved .		

Item Number: 20-70	NBIC Location: Part 2, S1.4.2.29	No Attachment
General Description: Inspection of Furnace Slides (submitted by Mr. Mark Ray)		
Subgroup: Locomotive Task Group: M. Ray (PM)		
Explanation of Need: Furnace slide supports which are locked in-place by corrosion will adversely impact the thermal expansion of the boiler and lead to staybolt breakage.		
July 2021 Action: PROGRESS REPORT: Locomotive is still working on the proposal.		

Item Number: 20-71	NBIC Location: Part 2, S1.6	No Attachment
General Description: Safety Valve Sizing (Correct Use of Capacity Charts) (submitted by Mr. Mark Ray)		
Subgroup: Locomotive Task Group: M. Ray (PM)		
Explanation of Need: This is to ensure safety valves provide the adequate relieving capacity for steam locomotive boilers.		
July 2021 Action: This item passed through Subcommittee LB and will be presented to MC. No Action was taken at the Subcommittee meeting.		

Item Number: 20-79	NBIC Location: Part 2, S10.10.4 c)	No Attachment
General Description: Add nomenclature to formula in S10.10.4 c) (originated from Public Review Comment PR20-0201)		
Subgroup: FRP Task Group: M. Gorman		
Explanation of Need: The current formula has no nomenclature to define the variables. The change request came about from Public Review Comment PR20-0201. The Main Committee voted in October of 2020 to open a new action item to add nomenclature for this formula. Variable definitions from Mr. Gorman: “U is the measured signal energy in joules. The signal is the captured waveform from, say, a fiber break source. V is the signal amplitude in volts point by point in the signal. Voltage must be corrected for gain (G). Z is in ohms. The (differential) time is dt in seconds.”		
July 2021 Action: Mr. Bernie Shelley from FRP Task Group gave an update to the Subcommittee on this item. The item was passed through FRP LB as of July 2, 2021. A motion was made to send the proposal to Subcommittee letter ballot for vote . The motion was seconded and unanimously approved .		

New Items:

Item Number: 21-03	NBIC Location: Part 2, S2	No Attachment
General Description: Inspection of through stays and diagonal stays (submitted by David Rose)		
Subgroup: Historical Task Group: None assigned		
Explanation of Need: The code is silent on the inspection of through stays and diagonal stays. Additionally, new repair methods are available from ASME that can be incorporated.		
July 2021 Action:		
PROGRESS REPORT: The task group is working on a proposal. A task group was assigned at the TG Historical meeting.		

Item Number: 21-25	NBIC Location: Part 2	No Attachment
General Description: Autoclave/Quick opening device PP (submitted by Kevin Hawes)		
Subgroup: Inspection Task Group: None assigned		
Explanation of Need: Upon our AIA (Intact) QRR I produced a Power point presentation on Autoclave inspections. Your NB team leader Gary Scribner suggested I forward this inspection presentation to the NB for review of content as mention of good reference material for next NBIC edition. I have attached a copy of this PP for your considerations.		
July 2021 Action:		
PROGRESS REPORT: A task group was assigned at the Subgroup Inspection meeting.		

Item Number: 21-34	NBIC Location: Part 2, S2	No Attachments
General Description: Working Pressure Calculations for Curved Stayed Surfaces		
Subgroup: Historical Task Group: Mike Wahl (PM), R. Bryce, and T. Dillon		
Background: In January 2021, Dr. Bryce initiated the conversation with the group for this topic. He is proposing the group open an item to address working pressure calculations for curved stayed surfaces. After discussion a task group was formed		
July 2021 Action:		
PROGRESS REPORT: R. Bryce is working on a proposal and will hopefully have something to present in January 2022.		

12. Future Meetings

- January 17th-21st, 2022 – San Diego, CA
- July 2022 – TBD

Mr. Getter discussed the future meetings with the Subcommittee.

13. DISCUSSION

Prior to the adjournment of the meeting Mr. Ray stated there are two meetings he would like to invite anyone that is interested. API meeting is in Orlando, FL on November 15-18, 2021, and there will be an Inspection Summit in San Antonio, TX on August 9-11, 2022.

14. Adjournment

A motion was made to adjourn the meeting at 10:27 am. The motion was seconded, and unanimously approved.

Respectfully submitted,



Jodi Metzmaier
Subcommittee Inspection Secretary

Subcommittee Inspection Attendance - July 14, 2021

MEMBERS:	Interest Category	HERE	In Person	Remote	Not In Attendance
Jim Getter - Chair	Manufacturers	x	x		
Mark Horbaczewski - Vice Chair	Users	x	x		
Tim Barker	Authorized Inspection Agencies	x	x		
Ernest Brantley	Authorized Inspection Agencies	x	x		
David Buechel	Authorized Inspection Agencies	x	x		
James Calvert	National Board Certificate Holders	x		x	
James Clark	Manufacturers	x	x		
Darrell Graf	National Board Certificate Holders	x		x	
Donnie LeSage	Jurisdictional Authorities	x	x		
John Mangas	General Interest				x
Venus Newton	Authorized Inspection Agencies	x	x		
Jeffrey Petersen	Users	x		x	
Brent Ray	Users	x	x		
James Roberts	Manufacturers	x		x	
David Rose	Users				x
Jason Safarz	General Interest	x		x	
Matt Sansone	Jurisdictional Authorities	x	x		
Vincent Scarcella	Authorized Inspection Agencies	x	x		
Thomas Vandini	National Board Certificate Holders	x	x		
Paul Welch	Authorized Inspection Agencies	x	x		

VISITORS:	Notes	In Person	Remote
M.A. Shah	ABM Industrial Services Inc. located in Canada		x
Gene Tompkins			x
William Hackworth	Arise - Membership pending	x	
Timothy Memmer	Quality Steel		x
David Parrish	Yankee Dryer TG		x
Brandon Wilson	Diamond	x	
Rob Kainec	Arise	x	
Bernie Shelley	Retired Chair of FRP		x
Jerry Jessick	Yankee Dryer TG - Membership Pending		x
David Warshall			x
Joe Morgan	Dow Chemical - Membership Pending	x	
Joel Amato	NBBI		
Luis ponce	NBBI	x	
Gary Scribner	NBBI		
Bob Wielgoszinski	NBIC Main Committee Chariman		

Announcements

- Zoom Notes:
 - Make sure all participants have their actual name on their zoom account.
 - Request attendees to add an “M” for Member, “V” for Visitor, or “S” for Staff at the end of their name. Example: Jodi Metzmaier - S
 - Click “Participants”, click “more” next to your name, click “rename,” and add the applicable letter.
 - Make Chair “co-host” if they are signed in on zoom.
 - Remind everyone to stay muted until they would like to speak.
 - We can use “raise hand” feature if needed.

- **We will do a voice voting for the negatives, not voting, and abstentions only.** Once the motion and second have been established, the chair will ask for any negatives, not voting and abstentions.

- **For new member voting,** we will let the nominees speak on their behalf, if they are joining us via Zoom, we will send them to a “breakout room” while the group has a discussion and votes. Once the vote is completed, the nominees will be allowed back into the main meeting “room”. If the nominee is at the meeting, we will ask them to leave the room for discussion and vote.

- The National Board will host a reception for all committee members and visitors on Wednesday evening from 5:30pm – 7:30 pm in the Continental Room on the Mezzanine Level.

- The National Board will host a breakfast for all committee members and visitors on Thursday morning at 7:00 am and a lunch at 11:30 am in the Rosewood room on the 4th floor of the Hotel.

- Coffee station with snacks will be provided in the morning (10:00 am) with different snacks/drinks on each floor. Afternoon (1:00 pm) coffee and cold drinks will be outside of the meeting rooms on the 3rd and 4th floors.

- The 2021 NBIC is available as of July 1st, 2021 and will become mandatory on January 1, 2022.

- Meetings schedule, meeting room layouts, and other helpful information can be found on the National Board website under the **Inspection Code** tab → NBIC Meeting Information.

- If the meeting ends early use the extra time to work with your task groups.
 - This can be done through Zoom/WebEx if needed.

Announcements

- Remember to add any attachments that you'd like to show during the meeting (proposals, reference documents, power point, etc.) to the cloud prior to the meeting.
 - If needed, we can go over how to do this.
 - Power point attachments need to be sent to Jonathan prior to the meeting for approval.
- Always submit attachments in word format showing “strike through/underline”
 - Does anyone need to know how to do this?
- Naming format reminder:
 - *Item number - person who made the revision - date update*
- As a reminder, anyone who would like to become a member of a group or committee:
 - must attend at least 2 meetings prior to being put on the agenda for membership consideration. The nominee will be on the agenda for voting during their 3rd meeting.
 - The nominee should submit the formal request along with their resume to Jonathan PRIOR TO the meeting. nbicsecretary@nbbi.org
 - If needed, we can also create a ballot for voting on a new member between meetings. To do this, you will need to contact Jonathan.
- All in person attendees can visit Jonathan in the office for a small gift.
- Thank you to everyone who registered online for this meeting. The online registration is very helpful for planning our reception, meals, the room set up, etc. Please continue to use the online registration for each meeting.

1.6 CHANGE OF SERVICE

Supplement 9 of this part provides requirements and guidelines to be followed when a change of service or service type is made to a pressure-retaining item.

Whenever there is a change of service, the Jurisdiction where the pressure-retaining item is to be operated, shall be notified for acceptance, when applicable. Any specific jurisdictional requirements shall be met.

1.7 SCRAPPING PRESSURE RETAINING ITEMS

The owner or user shall should deface, beyond recognition and remove the code nameplate(s) or stamping of any pressure retaining item that is scrapped. The removal or defacement of the Code nameplate(s) should be verified by the Inspector, and the National Board form NB-XXX shall should be completed and submitted to the National Board and Jurisdiction, if required.

ADD DEFINITION:

SCRAPPED – Permanent removal from service by owner's or user's procedures.

Scrapping of Pressure Retaining Items
In accordance with provisions of the National Board Inspection Code

1.Submitted to:

Name of Jurisdiction

Address

Phone Number

2. Submitted by:

(Name of Owner/User)

Address

Phone Number

3. Manufactured by:
(name and address)

4. Location of Installation:
(address)

5. Manufacturer's Data Report: YES NO

6. Item Registered with National Board: YES NO NB Number: _____

7. Item Identification:

Year Built: _____

Mfr. Serial No.: _____

Type: _____

Jurisdiction no.: _____

Dimensions: _____

MAWP: _____

8. Date of removal or defacement of the Code nameplate(s) _____

9. I certify that to the best of my knowledge and belief the statements in this report are correct, and with provisions of the National Board Inspection Code.

Name of Owner or User: _____

Signature: _____ Date: _____

Instructions for Completing the Form NB-XXX, Scrapping of Pressure Retaining Items Form

Items 1-9 shall should be completed by the owner, user, or "R" StampCertificate Holder making the request.

- 1) The name, address, and phone number of the Jurisdiction, Authorized Inspection Agency (when there is no Jurisdiction) the form is being submitted to for approval.
- 2) Enter the name and address of your company or organization.
- 3) Enter the name and address of the manufacturer shown on the name plate.
- 4) Enter the name and address of the location where the pressure-retaining item is installed. If this is the same as number 2, check the box "same as # 4."
- 5) Manufacturer's Data Report Attached-check the appropriate box.
- 6) Is the pressure-retaining item registered with the National Board? Check the appropriate box. If yes, provide the National Board Registration Number.
- 7) Provide as much information as known to help identify the pressure-retaining item.
- 8) Enter date the removal or defacement of the Code nameplate.
- 9) Enter the name and signature of the owner, user, or "R" StampCertificate Holder (and "R" StampCertificate number if applicable).

Note: Once completed the requester shall should file a copy with the Jurisdiction where the pressure retaining item is installed, the National Board (if registered with the National Board), and the owner or user of the vessel if the request was made by an "R" StampCertificate Holder, and upon request to the Authorized Inspection Agency who witnessed the removal or defacement of the nameplate.

Proposed NBIC Part II Section 2.3.6.11. Task 18-63

2.3.6.11 INSPECTION OF VESSELS FOR PRESSURES AT AND ABOVE 10,000 PSI

- a) This section provides guidelines for the inspection of pressure vessels designed for pressures at or above 10,000 PSI.
- b) Inspector shall verify the vessel is constructed to a standard acceptable to the jurisdiction.
- c) The inspector shall verify the following requirements as part of the inspection:
 - 1) Records are being kept of cycles;
 - 2) Complete documentation of installation of safety interlocks required by the manufacturer and the jurisdiction for the vessel with listed set points, readily available to the operator and inspector. All devices must be listed;
 - 3) Documentation of safety device alarms and interlock checks are being completed on each protective device and controls are calibrated in accordance with manufacturers specifications;
 - 4) Operators and maintenance personnel are trained for the inspection, maintenance and operation of the vessel and systems; and
 - 5) Documentation of pressure relief device inspection and testing.
- d) Vessels constructed for a set number of cycles, as defined by the code of construction, which have reached the end of those cycles, must be removed from service or requalified for continued use. Any requalification for continued service must be completed in accordance with the requirements of the jurisdiction, where applicable. The inspector shall verify that documentation of any requalification is retained.
- e) Requalification of any vessel shall either be completed by the original manufacturer or a manufacturer familiar with the construction of pressure vessels at and above 10,000 PSI. Guidance for completing requalification can be found in ASME PCC-3, *Inspection Planning and Using Risk-Based Methods*.

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Action Item Request Form

CODE REVISIONS OR ADDITIONS

Request for Code revisions or additions shall provide the following:

a) Proposed Revisions or Additions

Current text is incomplete with respect to inspecting riveted joints for failure. This proposal suggests adding more text, found in historic inspection documents, to further assist and direct the field inspector for assessing the condition of a riveted joint.

Existing Text:

S2.10.7 LIMITATIONS

- a) The maximum allowable working pressure shall be the lesser of that calculated in accordance with NBIC Part 2, S2.10, or the MAWP established by the original manufacturer.
- b) The shell or drum of a boiler in which a "lap seam crack" extending parallel to the longitudinal joint and located either between or adjacent to rivet holes, when discovered along a longitudinal riveted joint for either butt or lap joint, shall be permanently discontinued for use under steam pressure, unless it is repaired with jurisdictional approval.

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

The text covers cracks parallel to a longitudinal joint, but there is no text covering inspection of plate material around a rivet.

eb) Background Information

Review of the NBIC shows that failure indicators of riveted seams have not been identified or itemized. This proposal addresses this oversight.

Referenced standards, related discussion follow proposed wording.

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Proposed wording

S2.10.2.3 INSPECTION OF RIVETED SEAMS

A riveted joint in a vessel subjected to pressure may fail in a number of different ways, depending on the type and relative proportions of the joint. Some methods of failure may be classified as follows:

- a.) Rivets may shear off;
- b.) The plate may tear along the centerline of the row of rivets;
- c.) The plate may shear in front of the rivets;
- d.) The plate may tear from the outer edge of the rivet hole to the caulking edge; or
- e.) The plate may crush in front of the rivets.

Figure S2.10.2.3 illustrates visual indicators of (a), (b), (c), (d), and (e). The Inspector shall visually inspect for cracked or stressed plate material along a riveted joint. Indications of failure shall be monitored or repaired, at the discretion of the Inspector and jurisdiction, when applicable.

FIGURE S2.10.2.3

