

Date Distributed: January 20, 2016



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

NATIONAL BOARD SUBGROUP HISTORICAL BOILERS

MEETING MINUTES

Meeting of January 11th, 2016
Corpus Christi, TX

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 at 10:00 AM**
2. **Introduction of Members and Visitors**
3. **Announcements**
4. **Adoption of the Agenda**
5. **Approval of the Minutes of July 13, 2015 Meeting with revised SG Names**

The minutes from the July 2015 meeting are posted on the National Board website.

6. **Old Business**

Item Number: NB11-0204A	NBIC Location: Part 2, S2	www.nbicshare.org
General Description: Review NDE requirements for stayed areas on historical boilers		
Subgroup: Historical		
Task Group: M. Wahl (PM), J. Larson, F. Johnson		
Meeting Action : Approved Unanimously		

Item Number: NB11-0204B	NBIC Location: Part 3, S2	www.nbicshare.org
General Description: Review NDE requirements of stayed areas for historical boilers		
Subgroup: Historical		
Task Group: M. Wahl (PM), J. Larson, F. Johnson		
Meeting Action:		
Progress report. More editing required.		

Item Number: NB13-0902	NBIC Location: Part 3, S2	www.nbicshare.org
General Description: Review alternate methods of tube sheet repair		
Subgroup: Historical		
Task Group: F. Johnson, T. Dillon, M. Wahl		
Meeting action: Approved Unanimously		

Item Number: NB13-0903	NBIC Location: Part 2, S2.14	www.nbicshare.org
General Description: Add safety requirements for use of liquid or gaseous fuels to fire a historical boiler		
Subgroup: Historical		
Task Group: D. Rupert (PM), T. Dillon, J. Larson, R. Bryce		
Meeting Action: Progress Report		

Item Number: NB15-1601	NBIC Location: Part 2, S2.11 b) 2)	No Attachment
General Description: Requirements for the removal of jacketing/lagging insulation for inservice inspections of historical boilers		
Subgroup: Historical		
Task Group: T. Dillon (PM), J. Amato		
Meeting Action: Progress Report		

Item Number: NB15-1602	NBIC Location: Part 3, S2.7.1	No Attachment
General Description: Revise material list for historical boiler reports to include bolts, studs, nuts and formed pressure parts		
Subgroup: Historical		
Task Group: T. Dillon (PM), J. Amato		
Meeting Action : Progress Report		

Item Number: NB15-2901	NBIC Location: Part 3, S2	No Attachment
General Description: Review references to 1971 ASME Section I code edition with the recent additions of Part PL and Part PR in the 2015 ASME Section I		
Task Group: M. Wahl (PM), T. Dillon		
Meeting Action: Progress Report		

Item Number: NB15-3501	NBIC Location: Part 2	www.nbicshare.org
General Description: Address assorted errors in Part 2, S2		
Task Group: R. Bryce		
Meeting Action : Progress report		

7. New Business

Item Number: NB16-0501	NBIC Location: Part 3, S2	www.nbicshare.org
General Description: To clarify when telltale holes are required to be installed in staybolts 8 inches or less in length.		
Task Group: R. Underwood (PM)		
Meeting Action : Approved Unanimously		

Item Number: NB16-0502	NBIC Location: Part 3, S2.8.2.e	www.nbicshare.org
General Description: Water Gage Glass: The wording does not indicate how the highest point on the crown sheet to the lowest packing nut should be documented. This situation introduces a safety concern where an operator is asked to operate an unfamiliar boiler.		
Task Group: R. Bryce(PM)		
Meeting Action : Progress Report		

Item Number: NB16-0503	NBIC Location: Part 2, S2.9	www.nbicshare.org
General Description: Blow off valves The present wording does not specify the type of valve to be used in a given location. Specifically, examples of globe valves used in blow-down applications exist, which are prohibited in other codes. Suggest additional wording to keep text consistent with other standards.		
Task Group: R. Bryce(PM)		
Meeting Action : Progress Report		

8. Future Meetings

July 18-21, 2016 – Columbus, Ohio
January 9-12, 2017 – San Diego, California

9. Adjournment

Respectfully submitted,

Robert Ferrell
SG Historical Secretary

SG Historical Attendance Sheet - 1/11/16

Name	Company	Phone Number	Email	Signature	Attend Rec.?	Guest?
Joel Amato	State of Minnesota	(651) 284-5137	joel.amato@state.mn.us		Y	Y/N
Tom Dillon	Deltak	(763) 425-0733	tdillon@deltak.com		Y	Y
Bob Ferrell	National Board	(614) 888-8320	rferrell@nationalboard.org		Y	X
Robert Bryce	Heartland Software Services	(780) 545-4480	rbryce@heartlandsoftware.ca			
Jim Getter	Worthington Industries	(614) 840-3087	jim.getter@worthingtonindustries.com		Y	N
Frank Johnson	PBF Energy	(419) 698-6614	frank.johnson@pbfenergy.com		Y	N
James Larson	OneCIS	612-868-1192 (701) 584-1104	jmlgohome@earthlink.net		Y	N
Clayton Novak	State of Illinois	(815) 263-1144	clayton.novak@illinois.gov		Y	N
Dennis Rupert	Consultant	(517) 437-4565	rupertcull@comcast.net		N	
Robert Underwood	Hartford Steam Boiler	(618) 593-6231	robert_underwood@hsbct.com		Y	N
Mike Wahl	Wisconsin Historical Steam Engine Association	(920) 972-7308	mikew@midstal.com		Y	Y
Gary Scriber	NBOI		Gscriber@nationalboard.org		✓	N
DAVID ROSE	OWNER	780 217 8175	dr3747@telus.net		✓	✓
Rob Tront	state of Texas	512 638 2727	rob.tront@TDLR.texas.gov		Y	Y
Bonnie Petersen	manufacturer	115-820 2668	bonnie.petersen@bupapersystems.com		Y	N
Rickey Bryan	TDLR	682-888 4806	rickybryan@tdlr.texas.gov		N	Y
Lawrence Selensky	Turk Rheinland AJA Services	281-786-9316	lselensky@ajs.com		Y	✓
Jeff Knudson	Visitor	701 261-5778	steamhust@gmail.com		No	✓

File Number: NB11-0204A
Task Group Mike Wahl (PM) J. Larson, F. Johnson, R. Underwood
Subject: Part 2, Supplement 2 & Part 2, Section 9
Pages: See Below
Proposal: Several areas in the repair section for stayed areas need updating for NDE examination.

1. In Part2, Supplement 2, S2.4.4.1 (page 115) add the following text after existing paragraph.

The nondestructive examination (NDE) requirements, including technique, extent of coverage, procedures, personnel qualification, and acceptance criteria, shall be in accordance with the original code of construction for the pressure-retaining item. Weld repairs and alterations shall be subjected to the same nondestructive examination requirements as the original welds. Where this is not possible or practicable, alternative NDE methods acceptable to the Inspector and the Jurisdiction where the pressure-retaining item is installed, where required, may be used.

2. In Part2, Supplement 2, S2.5.1 (page 115) add "Volumetric" to the list of Specific Examination Methods
3. In Part2, Supplement 2, Section 9 (page 322) add definition for volumetric to Glossary of Terms. Definition used is from ASME Section 1 PW-11.2.

Volumetric NDE- A method capable of detecting imperfections that may be located anywhere within the examined volume. Volumetric NDE is limited to radiographic (RT) and ultrasonic (UT) examination methods.

File Number: NB13-0902
Task Group Mike Wahl (PM) J. Larson, F. Johnson
Subject: Part 3, Supplement 2, Update to Section S2.13.12.3
Page: 160
Proposal:

1. Add new text, 2) & 3) to better explain tube sheet repairs involving the knuckle area.
2. Update Figure S2.13.12.3
3. Add Figure S2.13.12.3A

Explanation:

Currently there is little to no information in supplement 2 on the repair of flanged tube sheets. This would add information to better define the use of welded repairs and alternatives for tube sheet repairs involving the knuckle area.

1. Add New Text

- 2) A flush patch repair can be welded through tube holes or around tube holes. (See NBIC Part 3, Figure S2.13.12.3)
- 3) If the Flush Patch repair extends through the tube sheet radius either the sheet should be flanged to match the original tube sheet flange or a welded alternative may be used as shown in NBIC Part 3, Figure S2.13.12.3.A

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S2.13.12.3 WELDED FLUSH PATCHES IN TUBESHEETS

- a) The method of repair shall follow the same requirements identified in S2.13.10.3 with the following requirement as noted below:
 - 1) Tubes, staybolts, and rivets should be installed after welding of the patch is completed. (See NBIC Part 3, Figure S2.13.12.3).

Add #2) and #3) in this area.

2. Update Figure S2.13.12.3

Add a 4th diagram to figure S2.13.12.3 to show a tube sheet repair, which encompasses the hand hole opening area, however doesn't extend through the tube area.

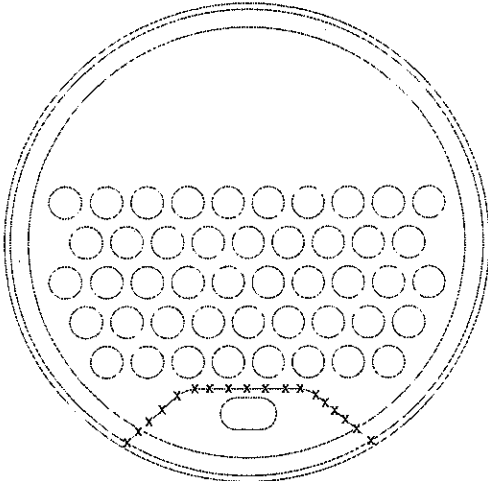
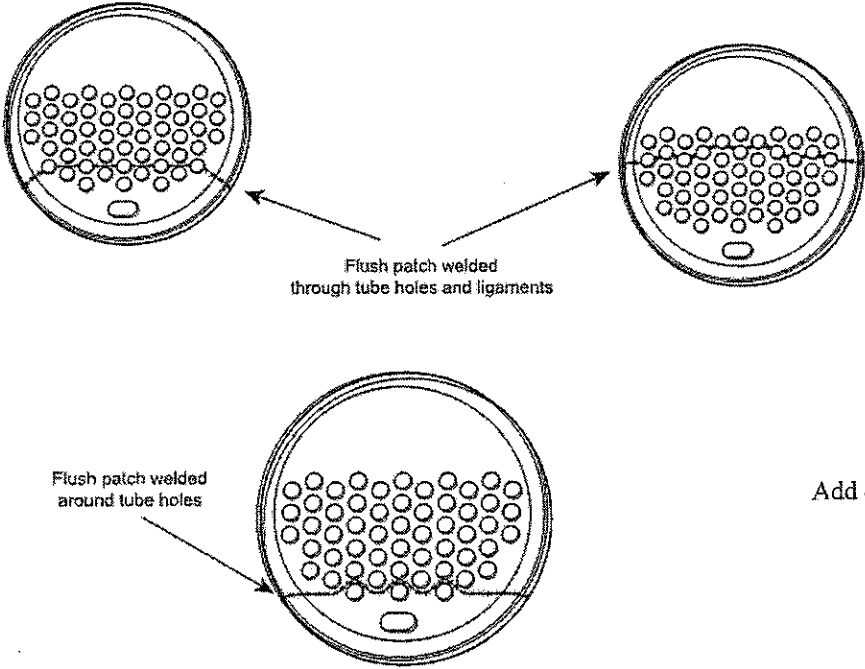


FIGURE S2.13.12.3
TUBESHEET FLUSH PATCH



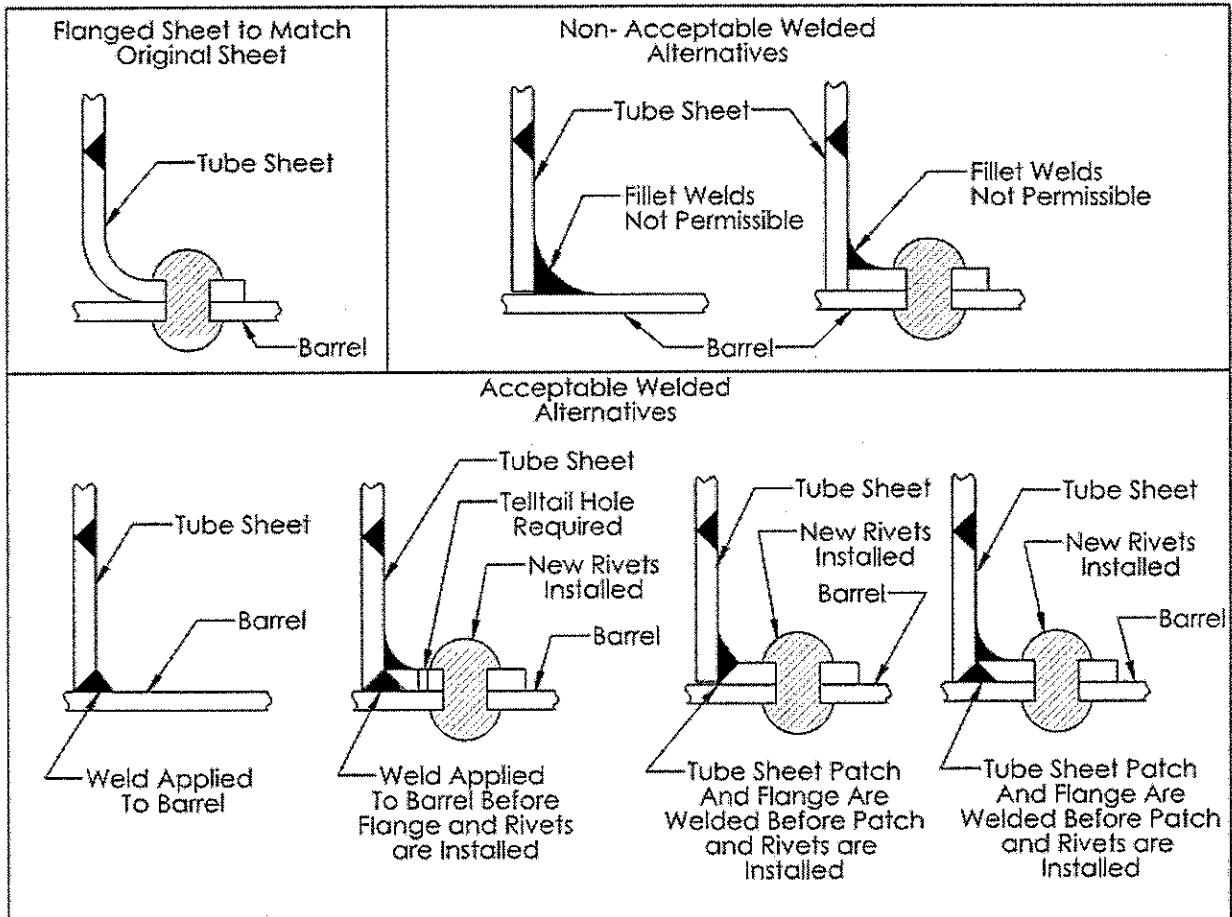
Add 4th diagram here

3. Add Figure S2.13.12.3A

Add figure S2.13.12.3a to show acceptable and non-acceptable tube sheet repair methods.

Note: Figure S2.13.12.3A has been created in Solid Works and can be exported to a several different file formats. Please e-mail mikew@midstal.com and I can send requested format.

FIGURE S2.13.12.3.A
Front Tubesheet Repair



Request for NBIC Part 3, Supplement 2 Revision

Robert V. Underwood
HSB Global Standards
Robert_underwood@hsbct.com
618-593-6231

NB16-0501

Purpose	To clarify when telltale holes are required to be installed in staybolts 8 inches or less in length.
Scope:	To eliminate the requirement of telltale holes in staybolts when replacing staybolts 8 inches or less in length when the original Code of construction did not require them.
Background	<p>In the performance of repairs to historical boilers by replacing/installing threaded and welded staybolts, paragraphs S2.13.2(b) and S2.13.4(c) of the NBIC Part 3, Supplement 2 require telltale holes in staybolts 8 inches or less in length.</p> <p>There is no reason to install telltale holes in these shorter staybolts if they weren't required by the original code of construction.</p> <p>Recommend revising S2.13.2(b) and S2.13.4(c) to eliminate telltale holes if the original construction code or standard did not require them. This will require telltale holes if required by the original code of construction or when replacing existing staybolts with telltale holes, but no all staybolt replacements.</p>
Proposed Revision	<p>Paragraph S2.13.2(b) shall be revised to read as follows:</p> <p>“Replacement of staybolts 8 inches and less in length shall have telltale holes when required by the original Code of construction or when replacing staybolts with telltale holes. Telltale hole diameter shall be 3/16 in. (5 mm) to 7/32 in. (5.5 mm) in diameter and at least 1-1/4 in. (31 mm) deep in the outer end. On reduced body staybolts, the telltale hole shall extend beyond the fillet and into the reduced section of the staybolt. Staybolts should have through telltale holes, which are preferred. (See Figure S2.13.2)</p> <p>Paragraph S2.13.4(c) shall be revised to read as follows:</p> <p>“Replacement of staybolts 8 inches and less in length shall have telltale holes when required by the original Code of construction or when replacing staybolts with telltale holes. Telltale hole diameter shall be 3/16 in. (5 mm) to 7/32 in. (5.5 mm) in diameter and at least 1-1/4 in. (31 mm) deep in the outer end. On reduced body staybolts, the telltale hole shall extend beyond the fillet and into the reduced section of the staybolt. Staybolts should have through telltale holes, which are preferred. (See Figure S2.13.4)</p>