

Date Distributed:



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

NATIONAL BOARD TASK GROUP LOCOMOTIVE BOILERS

MINUTES

Meeting of October 5th, 2021
Virtual via Zoom

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
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1. Call to Order

Chair, G. Mark Ray called the meeting to order at 2:03 pm EDT.

2. Introduction of Members and Visitors

Introductions took place amongst all members and visitors Virtually via ZOOM. The attendance sheet was checked off by the Chair and Secretary. (Attachment Page 1)

A special introduction was made welcoming the newest member to the TG – David Domitrovich.

Task Group Locomotive Boilers

Last Name	First Name	Interest Category	Role
Ray	G. Mark	General Interest	Chair
Musser	Rick	Users	Vice Chair
Bock	Jeanne		Secretary
Butler	Steven	General Interest	Member
Conrad	David	Users	Member
Cross	Charlie	Users	Member
Domitrovich	David	Users	Member
Franzen	Robert	General Interest	Member
Griner	David	General Interest	Member
Janssen	Matthew	General Interest	Member
Jordan	Mark	Jurisdictional Authorities	Member
Lee	Stephen	Users	Member
McCormack	Doyle	General Interest	Member
Moedinger	Linn	Users	Member
Stone	Richard	Manufacturers	Member
Welch	Paul	Authorized Inspection Agencies	Member

▪ Visitors

Jonathan Ellis (NB Staff)	

3. Check for a Quorum - (Attachment Page 1)

With the attached roster a quorum (13 out of 15 present) was established. There was a motion to approve the roster. The motion was unanimously approved.

Task Group Locomotive Boilers

Last Name	First Name	Interest Category	Role
Ray	G. Mark	General Interest	Chair
Musser	Rick	Users	Vice Chair
Bock	Jeanne		Secretary
Butler	Steven	General Interest	Member
Conrad	David	Users	Member
Cross	Charlie	Users	Member
Domitrovich	David	Users	Member
Franzen	Robert	General Interest	Member
Griner	David	General Interest	Member
Janssen	Matthew	General Interest	Member
Jordan	Mark	Jurisdictional Authorities	Member
Lee	Stephen	Users	Member
McCormack	Doyle	General Interest	Member
Moedinger	Linn	Users	Member
Stone	Richard	Manufacturers	Member
Welch	Paul	Authorized Inspection Agencies	Member

4. Awards/Special Recognition

None to report

5. Announcements

- It was announced that this TG will aim towards holding their meetings in January and July just as the NBIC meetings are held.

6. Adoption of the Agenda

- Added that Mr. Griner would like to have a discussion session on the performing of RT on the long seams of boilers greater than 100 years in age.

There was a motion to adopt the Agenda with the noted addition. The motion was unanimously approved.

7. Approval of the Minutes of March 2021 Meeting

The minutes are available for review on the National Board website, www.nationalboard.org.

There was a motion to approve the Minutes of March 2021 as published. The motion was unanimously approved.

8. Review of Rosters (Attachment Page 1)

Jonathan Ellis gave an explanation to membership appointments and reappointments as it relates to TG's.

a. Membership Appointments

None to Report

b. Membership Reappointments

None to Report

c. Officer Elections

None to Report

9. Interpretations

None to Report

10. Action Items

Old Business

Item Number: 20-70	NBIC Location: Part 2, S1.4.2.29	Attachment Page 2
General Description: Inspection of Furnace Slides		
Subgroup: Locomotive		
Task group: (PM) G. Ray		
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.		
October Meeting Action: Proposal – G. Mark Ray presented the comments received from the Review and Comment Ballot. A proposal was presented and discussed amongst the group. The TG made revisions to the proposal (V2). A motion was made to approve the revised proposal (V2) to SC Inspection. The motion was unanimously approved.		

New Business

Item Number: 21-35	NBIC Location: Part 2, S1.1.3.1	Attachment Page 3
General Description: Part 3, Table S1.1.3.1, Threaded Staybolts and Patch Bolts is incorrect		
Subgroup: Locomotive		
Task group: None assigned.		
Explanation of Need: The wording in the 2017 NBIC was "Threaded Staybolts and Patch Bolts SA-31 Grade A SA-675 with a tensile strength of 47,000 psi to 65,000 psi inclusive" A change was made for the 2019 Edition to reflect the grades rather than tensile strength. Somehow the wrong grades were used, and this was not caught until now.		
October 2021 Meeting Action: Proposal - Linn Moedinger presented and discussed a proposal amongst the group. The TG is in agreement with the proposal. A motion was made to approve the proposal to SC Inspection. The motion was unanimously approved.		

Open Discussion:

- Mr. Griner held a discussion session with the TG on the performing of RT on the long seams of boilers greater than 100 years in age. After extensive discussion the TG came to the conclusion that it may be good to compose a proposal and open up a new item to address this topic. Mr. Ray also suggested having someone from NDE join a meeting so as the TG can gain a better understanding of incorporating RT.

11. Future NBIC Meetings

- January 11-14, 2021, Loews New Orleans, New Orleans, LA
- July 12-15, 2021, The Hilton Netherland Hotel, Cincinnati, OH

12. Adjournment

A motion was made and unanimously approved to adjourn the meeting at 2:59 pm EDT

Respectfully submitted,



Jeanne Bock
TG Locomotives Secretary

Attachment 1**Committee Roster**

✓ = Present

Last Name	First Name	Interest Category	Role	Exp. Date
✓ Ray	G. Mark	General Interest	Chair	10/30/2022
✓ Musser	Rick	Users	Vice Chair	10/30/2022
✓ Bock	Jeanne		Secretary	01/30/2099
✓ Butler	Steven	General Interest	Member	01/30/2022
✓ Conrad	David	Users	Member	01/30/2022
	Cross	Users	Member	07/30/2023
✓ Domitrovich	David	Users	Member	01/30/2024
✓ Franzen	Robert	General Interest	Member	01/30/2022
✓ Griner	David	General Interest	Member	01/30/2022
✓ Janssen	Matthew	General Interest	Member	07/30/2022
	Jordan	Jurisdictional Authorities	Member	07/30/2023
✓ Lee	Stephen	Users	Member	01/30/2022
✓ McCormack	Doyle	General Interest	Member	01/30/2022
✓ Moedinger	Linn	Users	Member	07/30/2022
✓ Stone	Richard	Manufacturers	Member	01/30/2022
✓ Welch	Paul	Authorized Inspection Agencies	Member	07/30/2023

Item #20-70

Proposal V2

Task Group Locomotive Boilers**Summary**

Many steam locomotive operators do not inspect the sliding firebox supports on their locomotives (when they are equipped). Inspections have found them to be rusted in-place causing breakage of connection bolts and other damage to the locomotive firebox and mudring.

Furnace slide supports which are locked in-place by corrosion will adversely impact the thermal expansion of the boiler and lead to staybolt breakage.

Proposal**S1.4.2.29 BOILER ATTACHMENT BRACKETS**

The boiler attachment brackets and associated components and fasteners used to secure the boiler to the frame shall be inspected for:

- a) Correct installation;
- b) Damaged or missing components;
- c) Looseness;
- d) Leakage;
- e) Loose, bent, broken, or damaged rivets, nuts, bolts and studs;
- f) Defective rivets;
- g) Provision for expansion; and free movement of sliding supports.
- ~~h) Corrosion which may preclude free movement of sliding supports.~~

PROPOSED REVISION OR ADDITION

Item No. 21-35	
Subject/Title Part 3, Table S1.1.3.1, Threaded Staybolts and Patch Bolts is incorrect	
NBIC Location Part: Repairs and Alterations; Section: S1; Paragraph: S1.1.3.1	
Project Manager and Task Group	
Source (Name/Email) Linn Moedinger / linnwm@supernet.com	
Statement of Need The wording in the 2017 NBIC was "Threaded Staybolts and Patch Bolts SA-31 Grade A SA-675 with a tensile strength of 47,000 psi to 65,000 psi inclusive" A change was made for the 2019 Edition to reflect the grades rather than tensile strength. Somehow the wrong grades were used and this was not caught until now.	
Background Information ASME adopted SA-675 grades 45, 50, and 55 rather than using the tensile strengths of the material. Using the grades allows for material from 45ksi to 65ksi. The limitation of 7500 psi stay stress on locomotive boilers allows for 45ksi to be used with a design margin of 6.	
Existing Text Threaded Staybolts and Patch Bolts SA-31 Grade A, SA-675 grade 60, 65, 70	Proposed Text Threaded Staybolts and Patch Bolts SA-31 Grade A, SA-675 grade 60, <u>65, 70, 45, 50, 55</u>