



*THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS*

Date Distributed:

NATIONAL BOARD INSPECTION CODE GRAPHITE TASK GROUP

MINUTES

Meeting of July 31st, 2024
Columbus, OH

The National Board of Boiler & Pressure Vessel Inspectors
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1. Call to Order

The Chair, Mr. Aaron Viet, called the meeting to order at 9:05 a.m. Eastern Time.

2. Introduction of Members and Visitors

The following members were present for the meeting:

- Mr. Aaron Viet, Chair
- Mr. Jonathan Ellis, Secretary
- Mr. Chris Cary
- Mr. Keith Cummins
- Mr. Tracy Rudy
- Mr. Nolan Lee
- Mr. Francis Brown
- Mr. Andy Stupica
- Mr. Jesse Wince
- Mr. Justin Clements
- Mr. Sameh Mehrez

Mr. Joe Murray was in attendance as a visitor.

3. Announcements

Mr. Ellis announced that the draft edition for the 2025 NBIC would be going out for public review at the end of August.

4. Adoption of the Agenda

A motion was made and seconded to adopt the meeting agenda as presented. This motion was unanimously approved.

5. Approval of the Minutes of the March 2024 Meeting

The minutes from the March 2024 Task Group meeting can be found on the NBIC Committee Information page under the NBIC tab at nbbi.org.

A motion was made, seconded, and unanimously approved to accept the minutes from the March 2024 meeting.

6. Review of Rosters

- a. Membership nominations:
 - i. Mr. Joe Murray expressed interest in joining the Task Group. Mr. Ellis will reach out to Mr. Murray to get his resume.
- b. Membership reappointments:
 - i. None
- c. Officer nominations:
 - i. No new officer nominations.

7. NBIC Business

Item Number: NB15-2208	NBIC Location: Part 3, S3	No Attachment
General Description: Investigate repair options for graphite block heat exchangers		
Subgroup: Graphite		
Task Group: G. Becherer (PM), A. Viet		
Update: This item was approved by Main Committee at the July NBIC meeting and will be included in the 2025 NBIC.		

Item Number: 23-45	NBIC Location: Part 3, S3	No Attachment
General Description: Graphite plate replacement as Routine repair		
Subgroup: Graphite		
Task Group: Mr. Jesse Wince		
Update: This item was approved by Main Committee at the July NBIC meeting and will be included in the 2025 NBIC.		

Item Number: 24-67	NBIC Location: Part 3, S3	Attachment Page 1
General Description: Requirement for G-mark when replacing parts		
Subgroup: Graphite		
Task Group: A Viet, J. Wince, S. Mehrez		
July 2024 Meeting Action: Mr. Viet shared that Subcommittee R&A had an issue with the re-rate test pressure not being higher than the new MAWP. Discussion was held regarding how to re-word the proposal, and if there was a need to increase pressure timeline. After discussion the group decided to mirror the code language found in Part 3, 4.4.2. The proposal was revised accordingly, and a motion was made, seconded, and unanimously approved to accept the revised proposal.		

Item Number: New	NBIC Location: Part 3, S3	No Attachment
General Description: NBIC Document for Mechanical Repairs - TG Graphite review & comment		
Subgroup: Graphite		
Task Group: A. Stupica (PM), A Viet		
July 2024 Meeting Action: Mr. Ellis told the group that the National Board mechanical repairs guide remains on hold until further notice.		

8. New Business

- During the March 2024 meeting, Mr. Stupica proposed increasing the nozzle routine repair limit to 10 inches from 6 inches, as nozzles that size and smaller are popular and very easily handled. The group decided to table this topic for now until a satisfactory technical reason can be provided to present to Main Committee.
 - Discussion was held regarding how to present the necessity for this change. The group considered showing an example nozzle to show that this change would be reasonable. An item will be opened for this code change (24-86). See Attachment Page 2 for the initial proposal.

9. Future Meetings

- TG Graphite Meeting – November 20th, 2024 – Clearwater, FL
- NBIC Committee Meeting – January 13th-16th, 2025 – Charleston, SC

10. Adjournment

Mr. Viet adjourned the meeting at 10:21 a.m. Eastern Time.

Respectfully submitted,

Jonathan Ellis

Jonathan Ellis
NBIC Secretary

S3.2 REPAIRS

c) The material used in making repairs or alterations shall conform to the requirements of the original code of construction except as provided in NBIC Part 3, S3.2 j). The "R" Certificate Holder is responsible for verifying identification of existing materials from original data, drawings, or unit records and identification of the materials to be installed. Where material properties are used in supporting calculations, replacement parts shall meet or exceed the original material strength values; otherwise, recalculation and alteration is required.

S3.4 ALTERATIONS

a) The requirements provided in this section shall apply, insofar as they are applicable to the materials discussed herein. Completed alterations shall be subjected to a pressure test not less than operating pressure or more than maximum allowable working pressure. The test pressure shall be maintained for 30 minutes minimum. ~~subjected to a pressure test not less than that required by the code of construction. The test pressure shall be maintained for a minimum of 30 minutes. The pressure shall be reduced to MAWP and maintained for inspection.~~

b) All re-ratings shall be pressure tested in accordance with the original code of construction. Hold-time for the pressure test shall be a minimum of 10 minutes prior to examination by the Inspector. Where the test pressure exceeds the MAWP of the item, the test pressure shall be reduced to the MAWP for close examination by the Inspector. Hold-time for close examination shall be as necessary for the Inspector to conduct the examination, but not less than 30 minutes.

~~b_c)~~ Alteration of the spring design (e.g., change in stiffness or the initial compression) of a graphite shell-and-tube heat exchanger shall be done only after revised calculations have been prepared in accordance with the "R" Certificate Holder's Quality ~~Control~~ System and accepted by the Inspector.

S3.3 ROUTINE REPAIRS

a) The following repairs shall be considered routine, and shall comply with NBIC Part 3, 3.3.2 a), b), and c).

- 1) Machining — routine repair shall not include the machining of pressure-retaining parts with the exception of minor machining for cleaning and joint preparation not to exceed 1/32 in. (0.8 mm) of material thickness.
- 2) Repair of Gasket Surfaces — re-machining of gasket surfaces, re-serrating, or flattening is permitted if the design thickness is maintained.
- 3) Replacing Individual Tubes — drilling out and replacing tubes with new tubes or repaired tubes. Only certified materials shall be used for this repair.
- 4) Nozzle Replacement — complete or partial replacement of nozzles by removing all or a length of the existing nozzle and cementing a new piece in place. This is applicable for nozzles with inside diameters not exceeding ~~6-10~~ inches (~~254-152~~ mm).
- 5) Plugging Tubes — plugging individual tubes using accepted procedures.
- 6) Surface Repair — surface repair by installation of plugs or inlay material shall not exceed 1 in.³ (16 cm³) of total volume.
- 7) Replacement or Addition of Non-Load Bearing Attachments to Pressure-Retaining Item — For attachment of non-load bearing attachments to pressure-retaining items, the cementing procedure specification need only be qualified for the pressure part and cement to be used.