



*THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS*

Date Distributed:

NATIONAL BOARD INSPECTION CODE GRAPHITE TASK GROUP

AGENDA

Meeting of July 31st, 2024
Columbus, OH

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

The meeting will be called to order at 9:00 a.m. Eastern Time.

2. Introduction of Members and Visitors

3. Announcements

4. Adoption of the Agenda

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.

6. Review of Rosters

- a. Membership nominations:
 - i. None.
- 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
<p>General Description: Investigate repair options for graphite block heat exchangers</p> <p>Subgroup: Graphite</p> <p>Task Group: G. Becherer (PM), A. Viet</p> <p>March 2024 Meeting Action: Mr. Viet presented a new proposal for this item. The task group discussed revisions to the proposal, and some consideration was given to writing a future procedure for inlaying material. After discussion and editing, a motion was made, seconded, and unanimously approved to approve this proposal.</p> <p>Update: This item was approved by Main Committee at the July NBIC meeting and will be included in the 2025 NBIC.</p>		

Item Number: 23-45	NBIC Location: Part 3, S3	Attachment Page 3
<p>General Description: Graphite plate replacement as Routine repair</p> <p>Subgroup: Graphite</p> <p>Task Group: Mr. Jesse Wince</p> <p>March 2024 Meeting Action: The group discussed Main Committee’s hang up with the original proposal. After discussion, the group decided to remove the statement about using certified materials from S3.3 a) 8). A motion was made and seconded to approve the amended proposal. Additional consideration was given regarding editing S3.3 b) to potentially include plates. The group ultimately decided to leave it for now and revisit in a future item. A vote was taken, and the motion passed unanimously.</p> <p>Update: This item was approved by Main Committee at the July NBIC meeting and will be included in the 2025 NBIC.</p>		

Item Number: 24-67	NBIC Location: Part 3, S3	Attachment Page 1
<p>General Description: Requirement for G-mark when replacing parts</p> <p>Subgroup: Graphite</p> <p>Task Group: A Viet, J. Wince, S. Mehrez</p> <p>March 2024 Meeting Action: Mr. Viet presented a proposal for this item. Discussion was held regarding the proposal’s wording. Additional discussion was held regarding switching graphite material, even if the material can be shown to pass necessary requirements. Would that be an alteration? The group made comparisons to other parts of Part 3 (3.3.4, 3.3.3, 3.2.4), and discovered that pressure tests for alteration are performed at 1.3x MAWP, which was not the case for repairs. The groups decided that it didn’t make sense for the repair test to be less than the alteration, and so made changes to S3.4 a) to match S3.2 p). It was also decided to add a line item regarding testing re-rates at the new MAWP. A motion was made and seconded to approve proposal. This motion passed unanimously.</p>		

Item Number: New	NBIC Location: Part 3, S3	No Attachment
<p>General Description: NBIC Document for Mechanical Repairs - TG Graphite review & comment</p> <p>Subgroup: Graphite</p> <p>Task Group: A. Stupica (PM), A Viet</p> <p>October 2023 Meeting Action: Waiting for further developments on the NBIC guide for mechanical repairs. The TG has provided feedback to the document development process.</p> <p>March 2024 Meeting Action: Mr. Viet announced that the National Board’s mechanical repair guide is currently on hold for the foreseeable future. The group may consider writing a “mechanical repairs to graphite pressure vessels” section in the meantime.</p>		

Item Number: New	NBIC Location: Part 3, S3	No Attachment
General Description: Editing errors related to plug stitching, Ref S3.2 a) and e) Subgroup: Graphite Task Group: A Viet March 2024 Meeting Action: Mr. Viet presented a proposal to fix errors found in the plug stitching guide. Mr. Ellis stated that these errors can be fixed editorially since this error appeared due to a publishing error.		

8. New Business

- During the last 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.

9. Future Meetings

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

10. Adjournment

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 at the new maximum allowable working pressure. The test pressure shall be maintained for 30 minutes minimum.

~~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.