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

NATIONAL BOARD SUBGROUP GRAPHITE

MINUTES

Meeting of March 26th, 2019
Columbus, OH

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
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1. Call to Order

Subgroup Graphite Chair Mr. Aaron Viet called the meeting to order at 9:02am local time.

2. Introduction of Members and Visitors

Mr. Viet asked everyone present to introduce themselves. A sign-in sheet was also passed around. After introductions were finished, it was determined that enough members were present to establish a quorum.

3. Announcements

Mr. Viet asked Mr. Jonathan Ellis to present the following announcements:

- Lunch will be provided around noon.
- Main Committee has requested that a representative of the subgroup be present at Subcommittee R&A and Main Committee meetings to discuss Graphite items. This can be done in person or by phone.
- There is a new online submission system for requesting NBIC action items. Mr. Ellis provided a demonstration of the new system to the subgroup. This new system can be accessed by visiting the National Board's website and selecting "Submit Request for a Code Change, Revision, or Interpretation" under the National Board Inspection Code tab.

Mr. Ellis also provided a brief progress report on the publication of the 2019 NBIC.

4. Adoption of the Agenda

A motion was made and seconded to adopt the agenda. Mr. Viet suggested adding Mr. Nolan Lee and Mr. Richard Bulgin to Section 6 a. of the agenda. The motion was amended to include this suggestion and was unanimously approved.

5. Approval of the Minutes of October 24th, 2018 Meeting

The minutes from the October 2018 meeting can be found on the National Board website -

<https://www.nationalboard.org/Index.aspx?pageID=13&ID=18>

A motion was made, seconded, and unanimously approved to approve the minutes from the October 2018 meeting.

6. Review of Rosters

- a. Membership Nominations
- b. Mr. Nolan Lee and Mr. Richard Bulgin were nominated for membership to the subgroup. An executive session was held at the end of the meeting to discuss approving their membership. After reviewing their credentials and discussing the candidates, a vote was held to recommend them for membership. This vote passed unanimously. Mr. Lee and Mr. Nolan will be on the July 2019 SC R&A agenda for approval. Membership reappointments are also subject to approval by the Board of Trustees.

- i. Mr. Francis Brown’s reappointment to SG Graphite is pending SC R&A approval. Mr. Ellis will reach out to the Chair of SC R&A to request approval for a letter ballot to approve Mr. Brown’s reappointment.
 - ii. Mr. Justin Clemens’ and Mr. Keith Cummins’ memberships to the subgroup expire on July 30, 2019. Mr. Ellis will add them to the July 2019 SC R&A meeting agenda for approval.
- c. Officer nominations
- i. No new 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), Aaron Viet		
Meeting Action: Mr. Greg Becherer was not present at meeting to present updates. Discussion was held on potential repair methods, inspection requirements, and limits on block sizes, shapes, and materials. Mr. Viet will join the task group to help Mr. Becherer develop a proposal outline and some sketches for discussion at the next meeting.		

Item Number: 17-166	NBIC Location: Part 3, S3	Attachment Page 2
General Description: Remove nozzle replacement and tube replacement from graphite routine repair list		
Subgroup: Graphite		
Task Group: F. Brown (PM)		
Meeting Action: Mr. Francis Brown and Mr. Viet presented a new proposal for the item. Mr. Andy Stupica shared a recent example of a nozzle replacement/repair, with the AIA saying that for this to be a routine repair the whole nozzle would need to be replaced. Discussion was held on whether partial nozzle replacement would be a repair or alteration. A comparison was made to similar procedures for metal boilers, where nozzle replacements are not routine repairs. It was proposed that an additional line item be added to the proposal to specifically address nozzle repair, as well as how specific the details need to be. After discussing this option, it was determined that a separate item should be opened to adding nozzle repair to the list. Mr. Stupica and Mr. Monte Bost will work on a proposal. At the conclusion of discussions, a motion was made and seconded to approve the original proposal. This motion was approved unanimously.		

Item Number: 17-167	NBIC Location: Part 3, S3.2 d)	No Attachment
<p>General Description: Clarify repair inspection requirements for machined only graphite parts</p> <p>Subgroup: Graphite</p> <p>Task Group: M. Bost, A. Viet</p> <p>Meeting Action: Discussion was held on the previous meeting's action. Mr. Bost suggested that graphite should follow the procedures for metal boilers in that there shouldn't be a need for a partial data report. Discussion was held on if the data reports are necessary and if machined parts are parts or materials. Mr. Brown mentioned that the requirement was put in to the NBIC to have some control over the parts being used. Mr. Viet suggested that items could be shipped as materials with the MTR, which wouldn't need a Partial Data Report. Mr. Bost will work on a draft to present at the next meeting.</p>		

Item Number: 18-93	NBIC Location: Part 3, S3.2, S3.4 4.4.2 6)	No Attachment
<p>General Description: Test Duration</p> <p>Subgroup: Graphite</p> <p>Task Group: J. Clements (PM)</p> <p>Meeting Action: Mr. Justin Clements was not at the meeting to present updates. Mr. Viet went over the discussion from the last meeting. Discussion held on multi-chamber vessel tests and what the NBIC has for those. Further discussion was held on why the change was suggested, determining that it may not be necessary to make a change from a 30 minute test duration to a 10 minute test duration. The group determined it needed further clarification from Mr. Clements at the next meeting. Mr. Viet will ask Mr. Clements to have a draft proposal ready for the next meeting.</p>		

Item Number: 18-94	NBIC Location: Part 3, S3.2 f), h); S3.4 a), b), c) etc.	No Attachment
General Description: G-mark Requirements for Various Repairs/Alteration to Graphite		
Subgroup: Graphite		
Task Group: C. Cary (PM)		
Meeting Action: Mr. Viet gave a quick recap of discussion from the last meeting, and Mr. Chris Cary provided some additional detail. Mr. Cary announced that there were no new developments at this time. Mr. Brown asked if a “G” stamp holder should be required to do spring calculations. Discussion was held on the requirements/stamps needed for the person designing the part and/or performing the alteration. Changing the springs may not require a “G” stamp holder, but the alteration affects the materials and might need graphite expertise to do the calculations. It was determined procedures for this would include specifics similar to the tube plugging section (such as specifics for the “R” stamp holder). Mr. Cary will work on a proposal to present at the next meeting.		

8. New Business

Mr. Viet brought up a discussion with Mr. Clements about Part 3, S3.3 6) and why it was there. Mr. Brown gave some clarification, stating that larger repairs are allowed, they just aren't routine. Mr. Viet will talk with Mr. Clements to get clarification on his concerns.

Mr. Cary asked about OEMs shipping parts to different shops and what would be required to install the parts. Are the parts being “G” stamped; do additional requirements need to be provided? Could a “G” stamp be issued to only cover taking apart and reassembling parts from OEMs as long as the part comes from a “G” stamp holder? Some discussion was held, but no new action was taken at this time.

9. Future Meetings

- The next NBIC meeting is July 15th-18th, 2019 in Kansas City, MO
 - SG Graphite to continue to meet in Columbus in the summer.
 - Mr. Viet proposed a meeting time of July 10th and 11th. Mr. Ellis will see if there is room available at National Board Headquarters, otherwise other meeting accommodations will be made.
- October 2019 – Florida

10. Adjournment

Meeting adjourned at 12:02pm local time.

Respectfully submitted,

Jonathan Ellis

Jonathan Ellis
NBIC Secretary



Subgroup Graphite Attendance Sheet - 3/26/2019

Name	Company	Phone Number	Email	Signature
Aaron Viet	CG Thermal, LLC	(330)998-5120	aaronv@cgthermal.com	
Jonathan Ellis	The National Board	(614)431-3236	jellis@nationalboard.org	
Greg Becherer	CG Thermal, LLC	(330)405-0844	GregB@cgthermal.com	
Monte Bost	HSB	(937)620-3676	monte_bost@hsb.com	
Chris Cary	Dow Chemical Company	(502)732-2767	chris.w.cary@dowcorning.com	
Justin Clemens	Graphite Maintenance, Inc.	(863)581-0507	Justin@GMIGraphite.com	
Keith Cummins	Louisville Graphite	(502)893-6575	louisvillegraphite@yahoo.com	
Bob Dickerson	Mersen USA	(540)819-7161	bobwdickerson@gmail.com	
Bryan Jones	Mersen USA	(540)761-1078	cerberus20541@hotmail.com	
Andrew Stupica	SGL Carbon Technic, LLC	(440)572-3600	andy.stupica@sglgroup.com	
RICHARD BULGIN	SGL	440-572-3600 878-2226 3673	RICHARD.BULGIN@SGLCARBON	
DAVID HANNAH	SGL	440-878-2249	DAVID.HANNAH@SGLCARBON	
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FRANCIS BROWN	-	740-862-8901	FBROWN@ASME.ORG	
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KEITH CUMMINS	MERSEN	502-893-6575	keith.cummings@mersen.com	
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NOLAN LEE	MERSEN	540-204-1656	NOLAN.LEE@MERSEN.COM	

Record 17-166

S3.3 REPAIRS OF A ROUTINE NATURE

- a) The following repairs shall be considered routine, and shall comply with NBIC Part 3, 3.3.2.
- 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 — replacement of nozzles by removing the old nozzle and cementing a new **nozzle** in place. This is applicable for nozzles with inside diameters not exceeding ~~18 in. (460 mm).~~ **6 inches (152 mm)**.
 - 4) ~~6~~) Surface Repair — surface repair by installation of plugs or inlay material shall not exceed 1 in³ (16 cm³) of total volume.
 - 5) ~~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.
- b) Complete records of these routine repairs shall be kept for review by the Inspector. The records shall include the number of tubes replaced or plugged and their location within the tube bundle.