**Date Distributed:**



**NATIONAL BOARD INSPECTION CODE**

**GRAPHITE TASK GROUP**

AGENDA

Meeting of April 11th, 2023

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 Chair will call the meeting to order at 9:00 a.m. Eastern Time.

1. **Introduction of Members and Visitors**
2. **Announcements**
3. **Adoption of the Agenda**
4. **Approval of the Minutes of the November 2022 Meeting**

The minutes from the November 2022 Task Group meeting can be found on the National Board’s website. Mr. Ellis will also distribute a copy of the minutes to the group prior to the meeting.

1. **Review of Rosters**
	1. Membership nominations:
	2. Membership reappointments:
		1. Mr. Keith Cummins’ membership is set to expire in July 2023.
	3. Officer nominations:
		1. No new officer nominations.
2. **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**November 2022 Meeting Action:** Mr. Aaron Viet showed sketches of various repair scenarios. The intent is to illustrate typical repairs. Some could possibly be designated as routine. Ref ASME UIG-97(c): “Cracks and voids shall not be repaired by adding cement only”, and per UIG-81 repair of material requires a qualified procedure. Currently NBIC has no limit on cement depth or volume for repairs. Discussed adding dimensional/volume limits for repairs to S3.2 k). It was proposed to add cement-only repair of gasket surfaces as a routine repair with a limit of 3/16” depth – all present agreed this is a reasonable depth. Non-routine repair of gasket surfaces currently has no stated limit on the size or the depth of cement application. For graphite blocks, a Figure is to be added showing typical repairs for cracks, but not showing the gouge on the gasket surface. The repair technique for block cracks will be plugging. A. Viet is to produce a proposal file along with the finalized sketch. Need to consider where should it be inserted.  |

|  |  |  |
| --- | --- | --- |
| **Item Number: NB19-73** | **NBIC Location: Part 3, S3** | **No Attachment** |
| **General Description:** Requirements for who can make hole plugging repairs on graphite blocks |
|  |
| **Subgroup:** Graphite**Task Group:** A. Stupica (PM), C. Cary, S. Mehrez, A. Viet**November 2022 Meeting Action:** Mr. Andy Stupica showed a proposal to add plugging of drilled holes in blocks to the existing provisions for tube plugging. The Task Group discussed the scope and nomenclature and produced a revision of S3.3 Routine Repairs and S3.5.4 Plugging of leaking or Damaged Tubes to include block holes. Motion to approve, seconded and approved 7-0 (3 not present). Refer to committee secretary for balloting through Subcommittee on Repairs/Alterations. |

|  |  |  |
| --- | --- | --- |
| **Item Number: New** | **NBIC Location: Part 3, S3** | **No Attachment** |
| **General Description: Mr. Francis Brown proposal to revise S3.5.4 m)**By email of 01NOV2022, Mr. Brown proposed to revise 3.5.4 m) to read: The following statement shall be included on the R-1 form. The tubes defined in subparagraph f) were plugged per S3.5.4 f). The existing 3.5.4 m) says: “The scope of the work completed shall be described and reported on a Form R-1.” |
|  |
| **Subgroup:** Graphite**Task Group:** Mr. Francis Brown**November 2022 Meeting Action:** Task Group discussion noted that S3.5.4 m) applies to all of S3.5.4, not only to the tube plugging proposal in S3.5.4 f). The TG agreed that the existing language in S3.5.4 f) 3) is not sufficiently specific where it says: “The “R” Certificate Holder shall note on Line 8 of the R-1 Form the installation of cemented graphite tube plugs in accordance with this section.” (“this section” is ambiguous). TG discussion produced a revision to the sentence as follows: “The “R” Certificate Holder shall note on Line 8 of the R-1 Form the installation of cemented graphite tube plugs in accordance with S3.5.4 f).” All present agreed with this change. The existing S3.5.4 m) will remain unchanged as it applies to all of S 3.5.4. A. Viet to forward result of meeting discussion and markup to F. Brown.  |

|  |  |  |
| --- | --- | --- |
| **Item Number: New** | **NBIC Location: Part 3, S3** | **No Attachment** |
| **General Description:** Graphite plate replacement as Routine repair |
|  |
| **Subgroup:** Graphite**Task Group:** Mr. Jesse Wince**November 2022 Meeting Action:** The Task Group discussed and edited the proposal presented by Mr. Wince. Motion to approve was seconded, and proposal was approved 7-0 (3 not present). Item passes. A. Viet to send proposal document to J. Ellis for assignment of Item number and balloting through the Subcommittee on Repairs & Alterations.  |

|  |  |  |
| --- | --- | --- |
| **Item Number: New** | **NBIC Location: Part 3, S3** | **No Attachment** |
| **General Description:** Requirement for G-mark when replacing parts |
|  |
| **Subgroup:** Graphite**Task Group:** A Viet, J. Wince, S. Mehrez**November 2022 Meeting Action:** S3.2 h) and S3.1 b) appear to require a G-mark for a User to replace parts such as blocks. Refer to Minutes for September 2022 meeting for additional background. Group discussion established that any application of cement requires a G-mark except as per S3.5.4 f). There was additional discussion about various part replacement scenarios and whether they would require a G- or R-stamp. It is proposed to develop an alternative procedure for parts replacement by non-G-stamp holders. There was general agreement that such repairs would not be Routine. Note that a User is free to disassemble and reassemble existing parts, along with cleaning, inspection, replacement of packing and gaskets, etc.  |

|  |  |  |
| --- | --- | --- |
| **Item Number: New** | **NBIC Location: Part 3, S3** | **No Attachment** |
| **General Description:** Requirements for Inlays as Routine repairs |
|  |
| **Subgroup:** Graphite**Task Group:** Mr. Justin Clements (PM)**November 2022 Meeting Action:** The one cubic inch limit for inlays in S3.3 a) 6) is impractically small and “never happens”. Group discussion about practical limits, possibly based on a percentage of the complete part or an absolute volume, size or surface area. The limit could be a combination based on a percentage of the part and also absolute size/area/volume limits. For example, “inlay is not to exceed X% of the depth/thickness, Y% of the area and Z% of the total volume”. A volume of 32 in3 (8 x 4 x 1) was discussed as a practical volume limit. J. Clements is to produce a proposal for the next meeting. |

1. **New Business**
2. **Future Meetings**

NBIC Meeting – July 10th-13th, 2023 – St. Louis, MO

1. **Adjournment**

Respectfully submitted,

Jonathan Ellis

Jonathan Ellis

NBIC Secretary