

**Minutes of TG Graphite meeting November 2, 2022. Sheraton Sand Hill Resort, Clearwater Beach, FL. Recorded by C. Cary:**

*\*\*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. \*\**

**1. Call to Order**

The Chair called the meeting to order at 09:06 am EDT.

**2. Introduction of Members and Visitors**

Mr. Aaron Viet asked those at the meeting to introduce themselves. The following task group members were present for the meeting:

- Mr. Aaron Viet, Chair
- Mr. Greg Becherer
- Mr. Chris Cary
- Mr. Justin Clements
- Mr. Nolan Lee
- Mr. Tracy Rudy
- Mr. Andy Stupica

The following task group members were absent:

- Mr. Jonathan Ellis, Secretary
- Mr. Francis Brown
- Mr. Keith Cummins
- Mr. Sameh Mehrez

Mr. Jesse Wince of SGL was in attendance as a visitor. Per discussion in the September Task Group meeting his application is to be balloted at the NBIC Main committee meeting in January 2023.

**3. Announcements**

Chair Mr. Aaron Viet is to deliver a presentation on graphite repairs to the NBIC Main Committee in January 2023. A previous presentation was made on graphite equipment in general.

**4. Adoption of the Agenda**

The proposed Agenda was distributed in the meeting. Mr. Francis Brown proposed addition of an item to revise S3.5.4 (m), communicated by email on November 1, 2022. This item was added to the agenda by unanimous agreement. A motion to adopt the agenda was made, seconded and the updated agenda was adopted by unanimous agreement.

**5. Approval of the Minutes of the May 2022 Meeting**

Minutes of the previous meeting were distributed via email by Mr. Jonathan Ellis on October 20, 2022. A motion to approve the minutes was made, seconded and approved unanimously.

**6. Review of Rosters**

- a. Membership nominations:
  - i. Mr. Jesse Wince was unanimously nominated by the TG in the September meeting. His nomination is to be balloted at the January 2023 NBIC Meeting.
- b. Membership reappointments:
  - i. Members Cary, Lee and Rudy are to be reappointed at the expiration of their current terms.
- c. Officer nominations:
  - i. No new officer nominations.

**7. NBIC Business**

| <b>Item Number: NB15-2208</b>   | <b>NBIC Location: Part 3, S3</b> | <b>No Attachment</b> |
|---|----------------------------------|----------------------|
| <p><b>General Description:</b> Investigate repair options for graphite block heat exchangers</p> <p><b>Subgroup:</b> Graphite</p> <p><b>Task Group:</b> G. Becherer (PM), A. Viet</p> <p><b>Meeting Action:</b> 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.</p> |                                  |                      |

| <b>Item Number: NB19-73</b>   | <b>NBIC Location: Part 3, S3</b> | <b>No Attachment</b> |
|---|----------------------------------|----------------------|
| <p><b>General Description:</b> Requirements for who can make hole plugging repairs on graphite blocks</p> <p><b>Subgroup:</b> Graphite</p> <p><b>Task Group:</b> A. Stupica (PM), C. Cary, S. Mehrez, A. Viet</p> <p><b>Meeting Action:</b> 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.</p> |                                  |                      |

| Item Number: New   | NBIC Location: Part 3, S3 | No Attachment |
|--|---------------------------|---------------|
| <p><b>General Description: Mr. Francis Brown proposal to revise S3.5.4 m)</b><br/> 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.”</p> <p><b>Subgroup:</b> Graphite</p> <p><b>Task Group:</b> Mr. Francis Brown</p> <p><b>Meeting Action:</b> 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.</p> |                           |               |

| Item Number: New   | NBIC Location: Part 3, S3 | No Attachment |
|--|---------------------------|---------------|
| <p><b>General Description:</b> Graphite plate replacement as Routine repair</p> <p><b>Subgroup:</b> Graphite</p> <p><b>Task Group:</b> Mr. Jesse Wince</p> <p><b>Meeting Action:</b> 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 &amp; Alterations.</p> |                           |               |

| Item Number: New  | NBIC Location: Part 3, S3 | No Attachment |
|---|---------------------------|---------------|
| <p><b>General Description:</b> Requirement for G-mark when replacing parts</p> <p><b>Subgroup:</b> Graphite</p> <p><b>Task Group:</b> A Viet, J. Wince, S. Mehrez</p> <p><b>Meeting Action:</b> 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</p> |                           |               |

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.

|   |                                  |                      |
|---|----------------------------------|----------------------|
| <b>Item Number:</b> New   | <b>NBIC Location:</b> Part 3, S3 | <b>No Attachment</b> |
| <b>General Description:</b> Requirements for Inlays as Routine repairs  |                                  |                      |
| <b>Subgroup:</b> Graphite   |                                  |                      |
| <b>Task Group:</b> Mr. Justin Clements (PM)   |                                  |                      |
| <b>Meeting Action:</b> 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 in <sup>3</sup> (8 x 4 x 1) was discussed as a practical volume limit. J. Clements is to produce a proposal for the next meeting. |                                  |                      |

**8. New Business**

No new business

**9. Future Meetings**

NBIC Meeting – January 9th-12th, 2023 – Charleston, SC

Next TG Graphite meeting is planned for late March in Columbus OH, at the NBIC complex if available.

**10. Adjournment**

Mr. Viet adjourned the meeting at 4:45pm EDT.