The Repair Welding Subcommittee was called to order by the sub-committee co-chairs, Brad Etheridge and Geoff Rogers, at 1:05 PM. The sign-in sheet was passed. A total of 38 participants attended (6 members and 32 visitors) the meeting. Those present introduced themselves and their affiliation.

The following is a description of the significant items that were discussed:

2016 Subcommittee Meeting Minutes – The minutes from the 2016 Repair Welding Subcommittee meeting were briefly reviewed.

Interpretation requests – From a previous meeting of the Interpretations Task Group (ITG), Interpretation 1104-I-0628-16 pertaining to Section 10.2.3a was reviewed. Additionally, the recent requests for interpretation (RFI) addressed by the ITG on January 17, 2017 were reviewed. These RFI will be used to add clarity to Section 10 in the 22nd Edition of API 1104. For example, Section 10 does not currently consider the production weld process (SMAW, GMAW, FCAW, etc.) to be an essential variable for the repair weld procedure.

Discussion Items – Geoff and Brad presented a working draft of Section 10 for consideration and discussion by the subcommittee members. Due to extensive edits, a clean version (as opposed to tracked changes version) was presented. The majority of the proposed changes attempt to clarify and simply requirements in Section 10. The goal was to state in plain text many of the requirements and reorganize the section to group information in less places. Examples of the changes include:

- Company authorization requirements are now contained in one section, as opposed to dispersed throughout Section 10.

- Situations for when a qualified repair procedure is required were clarified.

- Clarification of crack repairs and the differentiation between metallurgical cracks and star/crater cracks were discussed.

- The minimum deposited repair length should be measured at the base of the repair groove, while the maximum deposited repair length should be measured at the base material surface.
The subcommittee took a brief break from 2:54 PM to 3:15 PM.

Discussion Items (continued) – Discussion of the updated version of Section 10 continued. Examples of the changes include:

- Clarifications for when toughness requirements for the repair weld must be met were discussed.

- Potential essential variables or specification information for the welding process and filler metal type repaired were identified as areas where more work is needed. It was suggested that a note should be added to Section 10 to the Lincoln Electric work on intermixing FCAW-S with other welding processes. Information can be found here: [http://www.lincolnelectric.com/en-us/support/process-and-theory/Pages/considerations-with-fcaws.aspx](http://www.lincolnelectric.com/en-us/support/process-and-theory/Pages/considerations-with-fcaws.aspx)

- It was proposed that until work on essential variables which control hardness in sections 5 and 12 are introduced that the requirement for hardness testing be removed. The guidance for performing hardness will remain however, just as the Charpy testing requirements do.

- Repair welder qualification requirements were updated to allow repair welders to be qualified for cover pass repair when making full thickness or partial thickness qualification welds.

Assignments: The co-chairs asked for volunteers to participate in a working group to continue working on revisions to Section 10. Kevin Wigren, Bill Amend, Scott Metzger, Mike Childers, Luke Ludwig, Kerry Shatell, Trevor Huffman, and Doug Pruitt (8) volunteered to participate. The working group has a goal to present a revised version of Section 10 to the sub-committee members for a vote in time for submission of the revisions to the main committee for the 1st ballot resolution for the 22nd Edition.

Other Business: No other business or concerns were raised.

The co-chairs thanked everyone for their participation. The meeting was adjourned at approximately 5:00 PM.