# API-AGA Joint Committee on Oil and Gas Pipeline Field Welding Practices

## 2013 Winter Meeting Minutes

JANUARY 23-24, 2013

NEW ORLEANS, LA

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<td>Alliance Pipeline Ltd.</td>
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<td>Masahiko Hamada</td>
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<td>Ronnie Wise</td>
<td>Price-Gregory International Inc.</td>
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<td>Chuck Woodruff</td>
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1.0 OPENING SESSION – First Day (Wednesday, January 23, 2013)

1.1 The meeting was called to order by the Chairman at 1:00 PM.

1.2 Introductions - All committee members and visitors were welcomed and each introduced himself/herself. An attendance sheet was circulated.

1.3 There were 22 out of 28 voting members represented. Scott Funderburk held the proxy for Brian Lang. A quorum was present.

1.4 Recognition awards were postponed until the next meeting.

1.5 Approval of the minutes of the 2012 Winter Meeting held in Fort Worth, TX was tabled due to errors.

1.6 The agenda for the January 2013 winter meeting was proposed for approval, with one change: the API update report was moved to after the 21st edition ballot update. Motion by Dave Culbertson and seconded by Bill Marhofer. 22 For, 0 Against, 0 Abstain. Motion passed.

1.7 Yong-Yi Wang raised a question regarding the procedure for subcommittee voting since the committee bylaws do not specifically address subcommittee voting. Bill Bruce suggested that we add something to the bylaws to address subcommittees.

**Action Item 2013-01: API (Ed Baniak) to provide suggested general verbiage to add to the bylaws regarding subcommittee voting rights.**

1.8 Subcommittee chairs are responsible for maintaining a roster of subcommittee members. This should be verified at each subcommittee meeting. If a subcommittee member is not contributing to the subcommittee, he or she may be removed as a subcommittee member, as determined by the subcommittee chair in consultation with the main committee executives.

1.9 API 1104 21st Edition Ballot and Other API Updates (Ed Baniak, API) -

- The ballot reached consensus. There are nearly 300 ballot responses that need to be resolved. The next ballot will be to review the changes made due to the previous ballot responses. The ballot period is six weeks. Any newly identified items will be considered for the 22nd edition of the document. Anyone can comment on the ballot.
- Anyone interested in being on the US Technical Advisory Group (USTAG) to ISO TC67, please contact Ed Baniak at API.
- Ed Baniak provided a summary of the changes to voting members (See Appendix A for details). Non-voting members of the committee include: Corresponding Members, Emeritus Members and Liaisons.
- Ed Baniak suggested revising how interpretations of API 1104 are handled. He suggested this be performed by a task group, not a
subcommittee. The task group would consist of a chair plus representatives from each subcommittee. The bylaws would need to be revised to reflect this change. API staff determines whether a submission is a request for information (i.e., a clarification of something already in the document) or an interpretation (i.e., not in the document or involving a change to the document).

**Action Item 2013-02**: API (Ed Baniak) to provide suggested general verbiage to add to the bylaws regarding interpretations.

- Bill Bruce suggested subcommittee chairs stagger their meetings to allow people to attend multiple subcommittee meetings.
- API documents incorporated by reference in the Code of Federal Regulations are posted on the API website in view only mode.

### 1.10 Review of Subcommittee Co-Chairs

- Fracture Mechanics: Yong-Yi Wang & Doug Fairchild
- General Interest Members: Don Thorn
- Maintenance Welding: Bill Bruce & Matt Boring
- Mechanized Welding: Don Thorn & Robert Gatlin
- Nondestructive Testing: Chuck Woodruff & Dave Culbertson
- Repair Welding Task Group: Alan Beckett & Geoff Rogers
- Welding Procedures & Welder Qualification: Bill Marhofer & Robert Lazor
- API 1104 21st Edition Editorial Group: Pam Michalski & Olivier Jouffron

**Action Item 2013-03**: Modification, Interpretation, and Policy SC: the chair needs to confirm Marshall Farley will continue to act as co-chair after being replaced by Richard Clyne as a voting member of the main committee.

**Action Item 2013-04**: Repair Welding TG: need to confirm Alan Beckett and Geoff Rogers will continue to act as co-chairs. Affirm to the main committee that this TG will become a SC.

Subcommittee co-chairs were instructed to resolve all outstanding ballot items and review the balance of the document for changes made by other subcommittees that might have technical impact to their section(s).

### 1.11 Line Pipe Inspector Certification Program (Tina Briskin, API)

Tina Briskin of API presented information on the new API certification program being developed for pipeline inspectors. This certification applies to new construction. A new document, API 1169, will be published for this program. Anyone interested in volunteering to develop this new program, please contact Tina Briskin at API (briskint@api.org). The proposed initial certification program will start with source inspectors and shop inspectors, then move on to pipeline inspectors. A study guide and new inspection document are in progress. See Appendix B for more details.
Motion to adjourn at 3:02 PM by Tom Reeder, seconded by Yong-Yi Wang. 22 For, 0 Against, 0 Abstain. Motion passed.

2.0 Second Day Activities (Thursday, January 24, 2013)

2.1 The meeting was called to order by the Chairman at 1:00 PM. There were 25 out of 28 voting members represented. A quorum was present.

2.2 Study on Test Procedure Development to Evaluate Pipe Properties at HAZ in Girth Welded Portion (Masahiko Hamada, Nippon Steel & Somitoh Metal) - Masahiko Hamada presented the results of a field girth welding simulation project conducted by Nippon Steel & Somitoh Metal that involved test procedure development to evaluate pipe properties in HAZ.

See Addendum 1

2.3 OPS/DOT Activities Information Report (Ken Lee, PHMSA) - Ken Lee provided an update on recent PHMSA activities related to: 2011 Pipeline Safety Act, leak detection, automatic shutoff & remote controlled valves, documents incorporated by reference, and recent PHMSA public meetings.

Recent construction concerns include not measuring volts and amps, crack detection when using gamma ray versus X-ray radiography, low strength X70 & X80 pipe, low strength bends & fittings, misalignment of bends, and early removal of line-up clamps.


PHMSA is proposing to incorporate the term “welding operator” into regulations.

See Addendum 2

2.4 Subcommittee Reports

Fracture Mechanics: The subcommittee reviewed ballot resolutions to Appendix A. The subcommittee also discussed strain-based ECA, use of Appendix A on post construction integrity assessment, charpy tests, and requirements on cross-weld tensile tests. See Appendix C for the full subcommittee report.

A question was raised concerning the allowance of indications up to 50% wall thickness in section A.5.1.5 and asked the subcommittee to consider adding a limit of the lower of 0.25 inch (6.4 mm) or 50% wall thickness. The subcommittee co-chairs and five members were present and agreed that this response to the ballot item was prudent and should be included. Consensus was achieved on the item by the subcommittee.

Nondestructive Testing: Tom Reeder has resigned as co-chair. Dave Culbertson is the new co-chair. The subcommittee reviewed ballot resolutions and identified changes needed. The committee identified some
items for consideration for the 22nd edition of the document: maximum size of a porosity pore in cluster porosity, placement of IQI’s, requirements related to number of exposures and acceptable position of film and film lengths, and defining “linear indications.” See Appendix D for the full subcommittee report.

**NDT Task Group on AUT Practices and Acceptance Criteria:** The NDT Task Group on AUT Practices and Acceptance Criteria has been asked to review current manual and AUT ultrasonic practices and acceptance criteria; and provide proposed changes to be balloted in the 1104 document that may be warranted based on the results of that review. The task group has identified a number of items to be addressed: segregation of manual UT and AUT techniques, further definition and guidance for manual UT & AUT techniques, additional technical requirements for AUT, sensitivity of manual UT and AUT versus RT, updating of AUT evaluation guidelines, and inspection of weld repairs. See Appendix E for the full task group report.

**Repair Welding Task Group:** The task group met and resolved two outstanding ballot responses. The task group recommends that a subcommittee be formed to address repair welding going forward, due to the significant enhancements made to Section 10. See Appendix F for the full task group report.

**Welding Procedure & Welder Qualification:** The subcommittee reviewed ballot comments and provided additional resolutions. The subcommittee also identified some clarifications.

**Maintenance Welding:** The subcommittee reviewed the ballot comment resolutions for Appendix B of the document. No additional changes were identified. The subcommittee also identified areas for improvement of Appendix B for the 22nd edition of the document. Bill Amend reviewed a list of frequently asked questions related to Appendix B of the document. See Appendix G for the full subcommittee report.

**Mechanized Welding:** The subcommittee provided resolution to outstanding ballot comments related to changing from “accelerated” cooling to “forced” cooling in essential variables and nick break requirements when manual and semi-automatic welding are included in the mechanized procedure. Other ballot resolutions to Section 12 were reviewed.

**Modification, Interpretations & Policy:** Due to the lack of co-chairs and subcommittee members present, an informal meeting of the subcommittee was held. The group discussed the outstanding interpretation requests and developed draft responses, which were forwarded to the committee chair for consideration. The need for an updated version of the interpretations spreadsheet on the API website was identified. See Appendix H for the full subcommittee report.

**API 1104 21st Edition Editorial Task Group:** The task group met on Tuesday, January 22, 2013. All ballot comments were reviewed and some
adjustments to resolutions were made. Outstanding ballot comments were forwarded to the appropriate subcommittee for resolution. The task group reviewed the document for consistency.

**General Interest Members Subcommittee:** No report.

### 2.5 New Business

Main committee chair, vice chair & secretary and subcommittee chairs need to discuss how to handle interpretations.

The bylaws need to be reviewed to address current subcommittee structure. We need to make the Repair Task Group a standing subcommittee.

The next meeting date and location are to be determined. The group discussed the best days to hold the meeting. The options were: the current schedule, start Wednesday morning with a half day of subcommittee meetings on Wednesday and Thursday, or a half day on Wednesday with a full day on Thursday and a half day on Friday. It was noted that Thursday and Friday conflict with API 5L meetings. The straw poll preference was to move the first day afternoon meeting to the morning and allow full afternoon subcommittee meetings.

A suggestion was made to review the bylaws as a whole, via a task group. The Chair asked that API review the document and make comments to areas that require updates. This proposed revision would be distributed to the voting members of the main committee for consideration.

A motion was made for the mechanized subcommittee to investigate the use of pulsed GMAW to determine if the current GMAW essential variables are sufficient to control pulsed GMAW. The motion was seconded. Discussion included concerns over potential proprietary information. The motion was called to question and seconded. Unanimously opposed. The vote on the original motion: For 19, Opposed 0, Abstain 2. Motion passed.

The Chair requested that all subcommittee co-chairs convene at the end of the main committee meeting to address some housekeeping items. This meeting resulted in the following actions:

- The Modification, Interpretation, and Policy SC would be renamed the Modification and Policy SC and a new Interpretation Task Group would be formed to reduce the response time of interpretations. This new TG would consist of the executive officers and one chair from each of the SCs or an appointed member of the SC. When API received an interpretation request they would email it to the TG members, who would review the request and submit a response back to API.
• The Repair Welding TG will become a subcommittee to maintain the new sections of the 21st Ed wording added by the TG.

The Joint API 5L/API 1104 Subcommittee report was presented by Aaron Litschewski. End straightness and end squareness are areas of discussion. There is a proposal to change end straightness from the last 36" to 60" and to define square to the end of the pipe, not the axis of the pipe. It was noted that offset beveling machines are available. Tim Burns broached the subject of limits on high end tensile values, and the need for an intermediate level for X52, X56, etc. Need to balance yield and tensile. Chuck Woodruff will replace Bill Fazackerly on the joint committee.

The 2012 meeting minutes need to be corrected to reflect the Fracture Mechanics subcommittee minutes. A motion to approve the minutes based on the Fracture Mechanics subcommittee minutes was made and seconded. For 20, Opposed 0, Abstain 1. Motion passed.

The Chair requested that all subcommittee reports that were not provided to the Secretary prior to adjourning should be emailed at the earliest opportunity.

Tom Reeder motioned to adjourn at 4:59 PM. Charlie Ribaldo seconded. The motion was unanimously approved.

Respectfully submitted,
Pam Michalski
Secretary, API 1104

Action Item Summary

Action Item 2013-01: API (Ed Baniak) to provide suggested general verbiage to add to the bylaws regarding subcommittee voting rights.

Action Item 2013-02: API (Ed Baniak) to provide suggested general verbiage to add to the bylaws regarding interpretations.

Action Item 2013-03: Modification, Interpretation, and Policy SC: the chair needs to confirm Marshall Farley will continue to act as co-chair after being replaced by Richard Clyne as a voting member of the main committee.

Action Item 2013-04: Repair Welding TG: need to confirm Alan Beckett and Geoff Rogers will continue to act as co-chairs. Affirm to the main committee that this TG will become a SC.

Action Item 2013-05: Ed Baniak, is to have the more-complete version uploaded by API staff. The more-complete version is now available at: http://mycommittees.api.org/standards/techinterp/transpipe/default.aspx
APPENDIX A

API Report – Ed Baniak

1104 Processing – Going Forward from Comment Resolution

- Ballot 2475, opened 10/12/11 – closed 11/27/11
- 18 Affirmatives; 4 Negatives; 0 Abstain; 6 Non-voters
- Response rate 79% (needs to be >50%)
- Approval rate 82% (needs to be >67%)
- Meets criteria for consensus
- Document will go for re-ballot
- Next ballot limited to changes only (additions and deletions)
- Comment resolution of 2nd ballot should lead to publication
- Publish by Summer 2013
- Attempt to resolve negatives, but not mandatory
- Consensus does not mean unanimity
- Can publish document with unresolved negatives

Documents of Interest to 1104

- API 6DX, Recommended Practice for Actuator Sizing and Mounting Kits for Pipeline Valves, 1st Edition, US Adoption of ISO 12490
- API 6D, Specification for Pipeline Valves, 23rd Edition, Pipeline Valves, Addendum 3 (Section 11.2)
- API 5L, Specification for Line Pipe, 45th Edition
- API 5LT, Recommended Practice for Truck Transportation of Line Pipe, 1st Ed
- USTAG Ballots:
  - Approved ISO 15589-2 – Petroleum and natural gas industries – Cathodic protection of pipeline transportation systems – Part 2: Offshore pipelines
  - Disapproved ISO 12736 – Wet thermal insulation coatings for pipelines, flow lines, equipment and subsea structures

New/Change of Voting Membership

- Due to the internal structure of the API-AGA committee (and supported by separate by-laws) voting is handled differently for the committee than other committees.
- To ensure a balance, voting is divided evenly over 7 Voting Categories
- There are 4 assigned votes per category
- 7 Voting Segments:
  - American Petroleum Institute – Pipeline Segment
    - Jim Ibarra
    - Donald Drake
    - Tim Burns
    - Dan Posipanko
    - Charlie Ribardo
    - Alex Afaganis
    - BP
    - ExxonMobil
    - Shell International
    - Buckeye Partners
    - BP
    - Alliance
  - American Gas Association
    - Marshall Farley
    - Alan Holk
    - Perry Sheth
    - Joseph Sieve
    - Richard Clyne
    - Consumers Energy Co.
    - El Paso Corporation
    - KeySpan Energy
    - Washington Gas Company
    - CenterPoint Energy
- Mike Childers  Southwest Gas Corporation
- Brian Moi
del  Dominion East Ohio
- Brian Laing  CRC Evans Welding Services
- Bill Marhofer  Serimax
- Don Thorn  Welded Construction LP
- Ronnie Wise  Price Gregory Construction
- Alex Afaganis  EVRAZ, Inc.
- Bruce Reichart  Tenaris Coiled Tubes
- Samar Saha  USS Technical Center
- Robert Wise  Moody International
- Aaron Litschewski  Stupp Corporation
- Ryan Addison  Tenaris
- David Culbertson  El-Paso Corporation NDT Technical Services
- Scott Metzger  Moody International
- Tom Reeder  Central NDT Inc.
- Chuck Woodruff  SeaOne Maritime Corporation
- Alan Beckett  Alyeska Pipeline Service Co.
- William Bruce  DNV Columbus, Inc.
- Robert Gatlin  Global Industries
- Pamela Michalski  Dominion East Ohio
- Bob Huntley  RHM Welding Consulting
- Wayne Klemcke  Independent Consultant
- Donald Stevens  DM Stevens and Associates
- Yong-yi Wang  Center for Reliable Energy Systems

Interpretations
- Current Process Requires Participation by Standing Subcommittee
- Subcommittee Meets only Once Per Year
- Subcommittee Members Overlap with other Subcommittees Meeting in Parallel
- Some Interpretations Require Immediate Attention
- Parallel Actions of Other Groups in Addressing RFIs
- Proposal to Make the Activity More Responsive
- Subcommittee become a Standing Task Group (Ad Hoc)
- 1104 Committee to Charge TG with Addressing RFIs (Will Need to Charge the TG Every Year)
- TG Consists of at Least 1 Member of the Other Subcommittees and the 1104 Leadership
- TG Chair Identified (1104 Chair, SC Chair, Other)
- RFIs Sent to TG Chair
- TG Chair Distributes to TG with Time for Response
- TG Chair Formulates Response Based on TG Input
- 1104 Chair Reviews / Approves the Response to RFI
- API Issues Response and Posts RFI
APPENDIX B
Line Pipe Inspector Certification Program - Tina Briskin

Background
- OTC (Operations Technical Committee) has been considering a certification program for Pipeline Inspectors since 2009
- Preliminary work done in 2009-2010
- Review of the industry available documents – gap assessment
- Need for an inspection document

Reasons to have a certification program
- Availability of Experienced and Qualified in-house inspection personnel is limited
- Many contractors are performing inspection work without direct owner/operator supervision and oversight
- Uncertainty and difficulty regarding contractor/inspector qualifications
- Pipeline Inspectors represent the industry and are expected to make significant decisions
- Public safety frequently rides on their decisions
- Currently there are no uniform requirements to determine the knowledge and skills required to perform inspection activities
- API’s 3rd party certification process would be unbiased and uniform in nature

Potential Benefits
- Provides industry with a method for centralized, independent, unbiased, legally-defensible certification
- Provides industry with a readily-accessible program to identify qualified inspectors
- Professional credential is industry-designed and industry-accepted
- Demonstrates industry support for minimum inspector competence
- Promotes industry safety, personnel and process management, and environmentally-sound performance
- Reduces the time and resources necessary for industry to qualify inspectors in-house or to screen/pre-qualify contractors
- Demonstrates to authorities a proactive approach to training/qualifying industry personnel and directly addresses recent concerns regarding new construction inspections

Task Force Charter
- Created in 2010
- Tasked with:
  - Creating an inspection document - API 1169 - Recommended Practice for Basic Inspection Requirements - New Pipeline Construction
  - Develop a Certification Process

Current status
- API RP 1169 almost completed
- Scope of the program – inspection of new construction
- Exam specification/exam databank work to begin in spring 2013
- Potential launch date – 1 quarter 2014
- Volunteers are welcome!!
API’s Expertise in Certification
- Running certification programs since 1989
- 11 different certification programs (basic and supplemental)
- Paper-based exams, online quizzes and performance demonstrations are offered
- Over 15,000 clients all over the world
- Certified individuals in 75 countries
- 8000 applicants tested in 2012

Website:  www.api.org/icp
APPENDIX C
Fracture Mechanics Subcommittee Report

API-AGA JOINT COMMITTEE ON OIL AND GAS PIPELINE WELDING PRACTICES
Fracture Mechanics Subcommittee
January 23-24, 2013
Chaired by Yong-Yi Wang, Ph.D. (CRES)

Minutes

Meeting Time and Attendance
The fracture mechanics subcommittee met in the afternoon of January 23 and in the morning of January 24 for a total duration of approximately 5 hours. Approximately 10-15 individuals participated the meetings. The attendance lists are attached.

Review and confirmation of Proposed revisions
The subcommittee reviewed all proposed revisions/changes of Appendix A in the draft 21st edition. All outstanding issues were resolved unanimously. The agreed revisions have been incorporated into the draft 21st Edition.

Other issues of discussion
The following items were discussed at the subcommittee meetings.

1. *Strain-based ECA*. The list of individuals who are interested in strain-based ECA was reviewed and updated.

2. *Use of Appendix A on post-construction integrity assessment*. Doug Fairchild asked if anyone was aware of cases when Appendix A has been used for integrity assessment after pipeline construction, either before or after placed in service. No one indicated whether this was ever done; however, the group agreed that, in principle, the procedures in Appendix A can be used for such applications. It was anticipated that a primary difficulty would be in obtaining appropriate material properties for the assessment post construction.

3. *Charpy tests*. The requirement for 50% shear area is removed in the draft 21st edition. The shear area requirement was meant to ensure ductile behavior of girth welds. However the percentage of shear area in welds is difficult to read and the value depends on the individuals making the reading. While the subcommittee voted to remove the shear area requirement, the group recognizes that the required energy values in the draft 21st edition can be too low for mechanized GMAW welds to ensure ductile behavior. There is a gap left by removing the shear area requirement that should be filled.

A number of options were proposed for consideration.

1) Test Charpy specimens at two temperatures, one at room temperature and one at the minimum design temperature. The averaged value at
the minimum design temperature needs to be above certain percentage of the averaged value at room temperature.

(2) Produce full transition curves of Charpy impact energy whereby the specimens are removed from only one o’clock location.

(3) For mechanized girth welds, require energy values higher than the current 40J/30J Appendix A criteria.

(4) Specify a minimum value of lateral expansion. Such value may depend on the strength of the weld being tested. The committee has no data to make recommendations for such values, although some companies and labs may have access to large quantities of such data. In addition, the consistency and repeatability of measurement by different labs for the same specimens may need to be checked and confirmed. The possibility of data mining was discussed.

The subcommittee will continue to work on those options. Draft language for some of those options will be developed.

4. Requirements on cross-weld tensile tests. The requirement for cross-weld tensile specimens not-breaking in the weld is removed in the draft 21st edition. Concerns were expressed that the removal of this requirement may lead to weld strength undermatching against the actual strength of the pipe. The undermatching welds can become the location of strain concentration in events of mostly displacement-controlled longitudinal loading, such as that imposed by ground movement.

The rationale for removing the requirement was given in the minutes of the prior meetings. The assurance of no weld strength undermatching can only be achieved when there is a reasonable control of the upper bound of the longitudinal pipe strength distribution. In the absence of pipe strength control, one of the best options is adding some language to the part of the appendix on stress analysis. Such language would highlight the potential consequence of strain concentration in the welds under certain loading scenarios.

5. Sign-up sheet for subcommittee meeting. The usual sign-up sheet from API requires the attendee indicate if he/she is a “member”. It’s not clear whether the membership refers to the subcommittee or full committee. A clarification from the full committee and/or API would be helpful. Furthermore, the subcommittee discussed drafting language to define what constitutes a subcommittee member. This is perceived to be useful in controlling the integrity of voting within the subcommittee. After some discussion about membership criteria, the co-chairs volunteered to draft language describing membership for later review by the subcommittee.
APPENDIX D
NDT Subcommittee Report

API 1104 - Subcommittee on Nondestructive Testing Procedures

Wednesday January 23, 2013 & Thursday January 24, 2013
InterContinental Hotel New Orleans, LA

Reference: Minutes of the Subcommittee on Nondestructive Testing Procedure meeting held in New Orleans, LA on Wednesday, January 23, 2013 & Thursday January 24, 2013

1-23-2013 Attendees:

<table>
<thead>
<tr>
<th>Subcommittee Members:</th>
<th>Visitor / Guests:</th>
</tr>
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<tbody>
<tr>
<td>Tom Reeder</td>
<td>Larry Schutte</td>
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<tr>
<td>C.P. Woodruff</td>
<td>David Glascock</td>
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<tr>
<td>John Kern</td>
<td>Iulian Lucaci</td>
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<tr>
<td>Donald Stevens</td>
<td>Jay Ward</td>
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<td>Jan Van ber ENT</td>
<td>Rick Clyne</td>
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<tr>
<td>David L. Culbertson</td>
<td>Dan Hysell</td>
</tr>
<tr>
<td>Robert Bates</td>
<td>Rodger Lawson</td>
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<tr>
<td>Timothy Burns</td>
<td>Mark Marshall</td>
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<td>Kim Hayes</td>
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Minutes: NDT Subcommittee meeting:

1. Co-Chairman, Chuck Woodruff called the NDT subcommittee meeting to order at 3:20 p.m. on Wednesday, January 23, 2013. He welcomed the members and guests and requested that all present sign the meeting attendance record.
2. The subcommittee reviewed and unanimously approved the agenda for the meeting.
3. Co-Chairman Woodruff reviewed the minutes of the January 25th, 2012 NDT subcommittee meeting. David Culbertson moved to approve those minutes as presented. Tom Reeder seconded the motion. The motion to approve the minutes passed with 7 ayes, 0 nays, and 0 abstaining.
4. Co-Chairman Tom Reeder resigned as Co-Chairman of the NDT subcommittee.
5. A motion was made by Robert Bates to nominate David Culbertson as Co-Chairman the motion was seconded by Tom Reeder. The motion was approved with 7 ayes, 0 nays, and 0 abstaining.

Old Business:

1. Bob Bates reported for the AUT and MUT task group. The TG met in April of 2012 and September 2012 to discuss the subcommittee tasking. The assignment was to determine if the sections defining the AUT and Manual UT requirements needed to be segregated and supplemented to take into account current industry practice. The task group has completed working on Section 11.4, however an additional meeting is being proposed for April 2013 to further discuss the edits made to Section 11.4 and further investigate if there are supplemented changes to be made to Section 9. It is requested that the task group assignment be extended for another year to take into account the additional work to be done. A review of the task group activity will be presented to the subcommittee during the January 24, 2013 subcommittee meeting.
New Business:
1. The NDT subcommittee reviewed the proposed editorial changes to 11.1.5 the consensus of the subcommittee is that the word nominal is correct and should not be changed to specified. Additionally Fig. 27 should read nominal and not specified.

Meeting Recessed:
Motion made to recess meeting until 8:00 a.m. January 24, 2013 by Bob Bates and seconded by Tom Reeder. The motion passed with 7 ayes, 0 nays, and 0 abstaining. The meeting was recessed at 5:10 p.m.

Meeting Reconvened:
The meeting reconvened at 8:10 a.m. Thursday January 24, 2013 by Co-Chairman David Culbertson.

1-24-2013 Attendees:

<table>
<thead>
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<tbody>
<tr>
<td>Tom Reeder</td>
<td>Kenneth Lee</td>
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<td>Donald Stevens</td>
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<td>David L. Culbertson</td>
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<tr>
<td>Robert Bates</td>
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<tr>
<td>Jan Van ber ENT</td>
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<td>John Kern</td>
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<tr>
<td>Chuck Woodruff</td>
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<td>Tim Burns</td>
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Old Business – Continued:
Robert Bates presented slides and discussion related to the AUT and MUT task group work.

New Business -Continued:
The subcommittee reviewed sections 9 and 11 of the draft copy of the 21st Edition. The following editorial changes still need to be made:
Section 9.3.13, 9.4.3, 9.5.3, and 9.6.3 wording should be changed back to pipe or piping components from base materials.
Section 9.3.9.2 sub letters read a, d, e, should be a, b, c etc.
Section 11.1.5 still needs editorial change to sentence starting with: When DWE/SWV. The word twice needs to be removed from this sentence. This change is listed on the Comments Sheet – Item 21 Reeder and Item 207 Woodruff. Both were reviewed voted on and approved.

A discussion followed that included proposed changes for the 22nd Edition. One issue was related to the maximum size of a porosity pore in Cluster Porosity. Also placement of IQI’s were discussed, it was agreed that considering additional wording could be desirable. Additional wording could also be added to define requirements related to number of exposures and acceptable position of film and film lengths. It was noted that the term linear indications is described in portions of the document without a definition of what is considered linear.

Regarding interpretation requests Don Stevens made a motion that the NDT subcommittee recommend that all requests for technical information or interpretations be
submitted in a timely manner by API to the Interpretations Subcommittee chairman for distribution and resolution. The Interpretations Subcommittee should have access to resources and a formal process to assure a timely response and resolution. The motion was seconded by Dave Culbertson. The motion passed with 6 ayes, 0 nays, and 0 abstaining.

**Adjournment:**
Tom Reeder made a motion to adjourn the meeting. The motion was seconded by Jan Van ber ENT. The motion passed with 6 ayes, 0 nays, and 0 abstaining.

The meeting was adjourned at 11:20 a.m.

Respectfully submitted,
*Tom Reeder*
NDT Subcommittee Secretary
APPENDIX E
NDT Task Group on AUT Practices and Acceptance Criteria Report

NDE Subcommittee Task Group API-1104 Section 9.6 & 11.4

Principal Task: To review current manual and AUT ultrasonic practices and acceptance criteria; and provide proposed changes to be balloted in the 1104 document that may be warranted based on the results of that review. Step one is to focus on workmanship application and acceptance criteria. Task group chairs to present a report for the subcommittee including current status, focus of work effort, and progress report.

Task Group Members: Chuck Woodruff, Don Stevens, Jan Van der Ent, Tim Burns, Zhenzang Tsang, Marty Ritz, John Leask, John Kern, Bob Bates

TG Initial Determinations:

- Segregation of Manual UT and AUT techniques are warranted
- Based on current industry practice further definition for AUT methods are required in the API-1104 Standard.
- Additional guidance for development & demonstration of both Manual and AUT techniques to be included
- Additional technical (clarifications/requirements) pertaining to AUT need to be included in the API-1104 standard
- Technical instruction to ensure comparable sensitivity between AUT & Manual UT and associated compatibility to RT
- AUT evaluation guidelines require updating
- Inspection of weld repairs

Progress:

- Task Group Meeting #1 held in Ft. Worth, TX Jan 2012 (1 day)
- Task Group Meeting #2 held in Houston, TX April 2012 (3 days)
- Task Group Meeting #3 held in Houston, TX September 2012 (3 days)
- Current Progress – 30% (estimated)
- Next TG meeting April 2013 – Houston, TX
APPENDIX E
Repair Welding Task Group Report

API-AGA JOINT COMMITTEE
On Oil and Gas Pipeline Field Welding Practices
REPAIR WELDING TASK GROUP REPORT
January 23, 2013
New Orleans, Louisiana

The Repair Welding Task Group was called to order by Bill Bruce at 3:00 PM on January 23, 2013. He indicated that Chairman Alan Beckett sends his regrets for being unable to attend the meeting. A total of 7 participants attended the meeting.

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

Disposition of Comments from Letter Ballot of 21st Edition of API 1104 – Input from this task group had been requested by the Editorial Task Group for two of the comments that were generated as the result of the letter ballot of the 21st Edition of API 1104.

- Sort Key 170 – This item pertains to 10.3.3.c, post-weld heat treatment (PWHT) requirements for repair welds. A previous sort key item resulted in the removal of the offending second sentence, which makes this sort key item a moot point. Essential variables for repair welds, including those for PWHT, are prescribed by 5.4.2, which requires that, if the original weld required PWHT, the repair weld also requires PWHT (i.e., omitting PWHT of a repair weld, when the original weld required PWHT, would violate an essential variable). The Repair Welding Task Group agreed that no further revisions to 10.3.3.c were required.

- Sort Key 138 – This item pertains to requirements for company authorization for repairs, which appear in 10.2.1 and 10.2.2.2. The Repair Welding Task Group determined that the requirements for company authorization are as intended as written, but are not ideally placed within Section 10. However, to make the requirements less cumbersome would require a major rewrite of 10.2.1. Therefore, the task group agreed to leave the requirement for company authorization in 10.2.2.2.

Bill Bruce indicated that he would pass these decisions along to the chair of the Editorial Task Group. Because of the large number of comments pertaining to Section 10 in 21st Edition of API 1104, the task group chose not to go through all of the dispositions that had been developed for each by the Editorial Task Group.

Other Business – The task group discussed the need to continue meeting in the future. It was agreed that there will certainly be opportunities for improvements to Section 10 and that the task group should become a subcommittee.

The chairman thanked everyone for their participation. The meeting was adjourned at approximately 4:45 PM.

Bill Bruce
Member
Repair Welding Task Group
The Maintenance Welding Subcommittee was called to order at 8:00 AM on January 24, 2013. A total of 12 participants attended the meeting.

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

Interpretation Requests – No formal requests for interpretation pertaining to Appendix B had been received from the Modification, Interpretation, and Policy Subcommittee.

Disposition of Comments from Letter Ballot of 21st Edition of API 1104 – No subcommittee input had been requested by the Editorial Task Group for any of the comments that were generated as the result of the letter ballot of the 21st Edition of API 1104. Therefore, the subcommittee went through all of the comments pertaining to Appendix B and discussed the disposition that had been developed for each by the Editorial Task Group. Only two of the comments remain unresolved (Sort Key Nos. 294 and 295), but these simply involve the need for attention from API staff – artistic improvements to Figures B-4 and B-6. Bill Bruce indicated that he would pass the concurrence of the subcommittee along to the chair of the Editorial Task Group.

Other Business – The remainder of the time was spent discussing ideas for improvements to Appendix B for the 22nd Edition of API 1104 and the need for updating the current roster for the Maintenance Welding Subcommittee. Regarding the former, Bill Amend brought a list of frequently asked questions pertaining to Appendix B that was discussed in detail. Regarding the latter, Matt Boring offered to contact those listed on the current roster to inquire about their interest in continued involvement.

The chairman thanked everyone for their participation. The meeting was adjourned at approximately 10:15 AM.

Bill Bruce Matt Boring
Chairman Co-Chairman
Maintenance Welding Subcommittee Maintenance Welding Subcommittee
An informal meeting of the Modification, Interpretation, and Policy Subcommittee was called to order by Bill Bruce at 10:30 AM on January 24, 2013. A total of 17 participants attended the meeting including subcommittee members, chairs of other subcommittees, and interested visitors. Neither of the co-chairs was present and there were an insufficient number of subcommittee members present to form a quorum.

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

Interpretation Requests – Ed Baniak had provided a list of outstanding requests for interpretation, one of which he reported was over 18 months old. Those in attendance reviewed all six requests and developed unofficial responses to each for the Modification, Interpretation, and Policy Subcommittee to consider. The requests that were provided by Ed Baniak and the unofficial responses that were developed by those in attendance are shown in the attached table. Bill Bruce indicated that he would forward the unofficial responses to the subcommittee co-chairs and the remainder of the subcommittee.

Technical Inquiry Database – Bill Bruce pointed out that the technical inquiry database on the API website is not up to date. An earlier version of the Excel spreadsheet has more entries than the current version. Bill Bruce offered to forward the earlier version to

Action Item 2013-05: Ed Baniak, is to have the more-complete version uploaded by API staff. The more-complete version is now available at:
http://mycommittees.api.org/standards/techinterp/transpipe/default.aspx

Proposed Procedural Changes – In the opening plenary session on the preceding day, Ed Baniak had informally proposed changes to the way in which requests for interpretations are to be handled in the future. The current system can take up to a year, and sometimes longer, for requests to be handled. Ed Baniak outlined the proposed changes and these were discussed by those in attendance.

Bill Bruce thanked everyone for their participation. The meeting was adjourned at approximately 12:00 PM.

Bill Bruce
Member
Modification, Interpretation, and Policy Subcommittee

<table>
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<th>Date Received</th>
<th>Section</th>
<th>Background</th>
<th>Question</th>
<th>Unofficial Response</th>
<th>Contact</th>
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<tbody>
<tr>
<td>4/28/11</td>
<td>5&amp;7</td>
<td>Joint alignment of</td>
<td>1.Is it acceptable to</td>
<td>This subject is not</td>
<td>Marshall Farley</td>
</tr>
<tr>
<td>Date</td>
<td>Section</td>
<td>Question</td>
<td>Answer</td>
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<tr>
<td>2/29/2012</td>
<td>6.2.2</td>
<td>Would it be permissible to clerically change one of our existing welding procedures to reflect those limits listed in 6.2.2?</td>
<td>No. A change in an essential variable requires requalification.</td>
<td>Ralph Pfister</td>
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<td>Duke Energy</td>
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<td></td>
<td></td>
<td>139 East 4th Street</td>
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<td>Cincinnati, OH</td>
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We have numerous procedures that were developed using different limits on wall thicknesses that those listed in 1104, Section 6.2.2. We use GMAW for shop and field welding of pipe X65 grades and less. We sometimes install an alignment tack root pass 2” or less to aid in the alignment of restrained joints. The fitup is moved to obtain alignment in the remainder of the joint. We also install subsequent passes over the root bead segments while in the lineup clamps to strengthen the root bead and reduce the stress on the single pass root bead. Referred to in AWS as Block Sequence.

Deposit alignment tack root bead segments with the pipe ends in the lineup clamps and then move the pipe to complete the alignment/root opening spacing of the abutting ends?

2. If a root bead alignment tack has been deposited with the pipe in the lineup clamps and the pipe has been moved to complete the alignment, is it necessary to remove the alignment tack prior to completing the remaining root bead?

3. Can this alignment tack be ground, examined visually, and then be incorporated into the finished weld?

4. Is it acceptable to move the pipe, not roll, after starting to deposit the root bead in the fixed position before the root bead is completed?

5. Is it acceptable to deposit hot pass and additional pass segments over the completed root bead segments to strengthen the root bead in restrained fitups before completing the entire root bead and prior to removing the lineup clamps. This is defined as block sequence by AWS.
6.2.2e. For example, we have procedures for welding pipe ≥ 2¼" to ≤ 12¾" with tensile grades ≤ 42,000 PSI, each have a thickness range of ≥ 0.188" to <0.250"; ≥0.250" to <0.344"; ≥to 0.500"; essence we would take a preferred welding procedure and change the wall thickness limits to those listed in paragraph 6.2.2 and place those other welding procedures in an archive file.

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<th>Date</th>
<th>Section</th>
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<td>4/5/12</td>
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<td>5.4.2.3</td>
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<td>5/2/12</td>
<td>6.2</td>
</tr>
<tr>
<td>Date</td>
<td>Comment</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>6/4/12</td>
<td>While performing a nick break test on specimens, silvery, shiny areas of the weld metal are seen. I have heard all sorts of explanations as to what this is. I’m told it’s nickel deposits by some and others are calling it slag.</td>
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