MINUTES
API Subcommittee 17 (SC17)
Subsea Production Equipment
2016 Winter Committee Meeting
Houston, TX
Wednesday, January 13, 2016

John Bednar, Chairman
Brian Skeels, (Co) Vice-Chairman
Bruce Witwer, Liaison Materials
Terry Cook, (Co) Vice-Chairman
and Liaison Industry Standardization
Ross Frazer, (Co) Vice-Chairman
Man Pham, Secretary
Jens-Henrik Neuenkirchen
Liaison International Standards

1. Meeting Opening/Safety Issues
   • SC17 Chairman welcomed the Subcommittee members and attendees to the meeting at 8:00 AM with opening remarks and safety/housekeeping overview.
   • Review and comment on API Summer 2015 Minutes of Meeting

2. Attendance and Rosters - Roll call of attendees/rosters. The chair reviewed the subcommittee organization chart that shows the leadership team and their responsibilities (Attachment 01)

3. Review of SC17 Membership details list (address, phone number)

4. A roll call was completed and confirmed that there was a quorum of 21 present for this meeting (a minimum of 15 is required).

5. API 2016 Winter Meeting Agenda review: Motion was made to approve. Seconded. Motion passed

6. Antitrust reminder was provided by API staff. All present acknowledged their understanding of the antitrust rules.

7. The updated SC17 Voting Representation Listing was updated (Attachment 02), the API Work Group Leads Contact List was presented (Attachment 03)

8. The Standards Status Matrix (Attachment 04) was presented by API Staff.

9. The subsea poster (Attachment 05) was updated and copies provided to the membership.

10. Minutes from API Summer [San Francisco] 2015 Meeting: Motion was made to approve. Seconded. Motion passed.

11. International Standardization
    • World Economic Forum - JIP 33 (IOGP) – John Osborne
      Presentation on World Economic Forum - Capital Projects and Timelines and the JIP 33 (IOGP) (Attachment 06). Work began in June 2015. Created as an overlay to API documents
Initial work was agreed to be based on subsea trees.

- **Update – Terry Cook**
  Updated presentation (Attachment 07) - New standards being worked: Forging Material JIP (DnV), Supplement to API 17D (JIP33 IOGP), Subsea Tree Standardization (JIP33 IOGP). In general, SC17 supports the intent of these other initiatives but encourages that the final work be considered for incorporation into API documents.

12. **SC21 and Materials Update – Bruce Witwer**
    Updated presentation (Attachment 08)
    SC21 was approved in summer 2015 as a new subcommittee. Chair is Rob Hilts (Halliburton)
    DNV GL RO-034 – Steel Forgings for Subsea Applications:
    - Many operators are currently discussing the adoption of this document into their material specification(s).
    - There are 3 forging classes (SFC’s).
    - The document covers carbon steel and low/micro alloys.
    - The document contains discrete dissimilarities with existing API documents (e.g. API 6A & 20B).

13. **API 18LCM (Life-Cycle Management): SC18-TG7: Mike Briggs (on phone call)**
    Document went to ballot and passed.
    - Received 356 comments
    - Biggest concerns were on scope, documentation and LCM levels – In general, the applicability of the document (what is covered and not covered)
    - Working toward limiting initially to wellbore pressure equipment
    - Purpose of the document – intended to be high level for basic lifecycle management but supported by the product/equipment specification
    - Document is not intended to be prescriptive as to how it specifically applies to equipment; It will be more like a management system document (such as Spec Q2)

14. **Update on SC18, Subcommittee on Quality, Task Group Liaison: Moshen Shavandi (Attachment 09)**
    - Summary of ongoing activity and open action items from the subcommittee provided as per the attached report.

15. **SC18 - API 18TR3 – Definition of a Manufacture Ed Baniak and Austin Freeman**
    The recommendation will be that the 18TR3 document will no longer be an SC18 product (pending SC18 approval) and the work be moved to the Monogram Program Board. The information from the ballot and task group will be used to update monogram program information to the licensees on what constitutes eligibility for licensing.

16. **International Involvement: Jens-Henrik Neuenkirchen**
    - Goal to maximize international participation in API standardisation work
    - Example of international interaction:
      - API 17F Chairman – based in Houston
      - Work Group Leader EEC – based in Norway
      - The core working group made up of operators and suppliers.
    - The two groups are jointly responsible for the final submission to API
    - Relevant subcommittee 17 documents where proposed work method may be productive: 17A, 17D, 17E, 17F, 17G, 17H, 17P
17. Task Group / Project Lead Reports

a) API 17Q: Subsea Qualification
- The Task Group report was given by Matt Green (Attachments 10 and 10a)
- The document will be revised to identify an RP for the process of qualification (and will not be part of 17N)
- Annex F from 17N (New Technology Qualification) will be removed and act as the basis for the new document
- Document will apply to new equipment and extend qualification of existing equipment
- Level of detail intended to be simple
- Goal is to go to ballot in 2016

b) API 17G: Completion Workover Riser
- The Task Group report was given by Brian Skeels (Attachments 11, 11a, 11b, 11c, 11d and 11e)
- The sixth draft of 17G was sent out for comment on May 5th 2015
- Comments specific to connector qualification are required to complete
- The Task Group is expected to end the comments by the end of January
- The thinking is that the document will be split (minimally) into two documents [manufacturing and operations]
- Larry Phipps contracted to work on the split of the document (the 7th draft with all comments resolved)
- Baby G’s reports were provided as follows:
  1) G1: Non-Ferrous systems (Ti, Al and composite materials)
     - Titanium and Aluminum - Draft completed
     - TG expected to review the draft and provide comments internally.
  2) G2: Subsea Pumping Well Intervention System
     - Draft is done and expects to circulate soon for review.
  3) G3: Light Duty Intervention System (LDIS)
     - This group has determined that there is not enough information to warrant a separate document. Therefore, the TG has requested that the document be withdrawn.
     - Motion was made to withdraw the 17G3 project but to move the current information into 17G draft. Seconded. Motion passed (with no dissent).
  4) G4: Riserless Light Well Intervention Systems
     - The plan is still to align 17G4 with the main 17G document such that it refers to the main document where possible and put the riserless exception in the 17G4 document.

c) API 17A: Subsea Production Systems
- The Task Group report was given by Ed Knerr (Attachments 12 and 12a)
- The Task Group was asked to address “What is the purpose of this document?” - Continues to be as before – general requirements and recommendations for subsea equipment
- Equipment requirements for specific types of equipment have been removed
- The document now references and describes the other documents
- Proposes common terminology for testing in the 17-series documents; being worked with the 17Q Task Group
- The Task Group was asked to the “traffic-cop” issue to determine content with other SC17 documents. 17A is not intended to conflict with the other SC17 documents.
d) API 17TR13: General Overview of Subsea Production Systems
   • The Task Group report was given by Ed Knerr (Attachment 13)
   • At the SC 17 summer meeting of 2014 it was agreed to delete Annex A from API 17A and to resubmit the information as a Technical Report, API 17 TR13.
   • TR13 was successfully balloted in early 2015:
     – 23 affirmative, 1 negative, 2 abstain, 3 did not vote
     – Response rate = 90% (>50% req’d), Approval rate = 96% (>66.7% req’d)
     – Consensus - YES
     – A total of 138 + 2 = 140 comments were received back:
   • The page proofs (publication document) are expected in the next 30 days.

e) API 17TR14: Flow Assurance Considerations in Subsea Production Systems
   • The Task Group report was given by Ed Knerr (Attachment 14)
   • Task Group has reviewed the document and recommends the withdrawal of the document for publication.
   • Motion was made to withdraw the 17TR14 project and make reference to the topic within 17A. Seconded. Motion passed (with no dissent).

f) API 17F: Subsea Production Control Systems
   • The Task Group report was given by Christopher Curran (Attachment 15)
   • The 4th Edition kick-off February 2015
   • Improve communication descriptions and requirements to the communication links
   • No major issues so far
   • No outstanding actions

g) API 17O: HIPPS
   • The Task Group report was given by Christopher Curran (Attachment 16)
   • API 17O published in 2014
   • No current or planned activities
   • No outstanding actions

h) API 17V: Subsea Safety
   • The Task Group report was given by Christopher Curran (Attachment 17)
   • API 17V published in March 2015
   • Objective is cover safety systems for subsea applications; this document is a companion document to API 14C which focuses on topside safety systems.
   • No outstanding actions

i) API 17Y: Chemical Injections
   • The Task Group report was given by Christopher Curran (Attachments 18 and 18a)
   • Draft Table of Content developed
   • Estimated completion at the end of 2017
   • Structure and scope described
   • Task Group working regularly and updating the document
   • No outstanding actions

j) API 17W: Capping Stack
   • The Task Group update was given by Dan Sadewater
   • API 17W 1st Edition was published in 2014
   • No major issues so far
   • No outstanding actions
k) API 17N: Subsea Reliability
- The Task Group report was given by John Allen (Attachment 19)
- Ballot passed and document under comment review now.
- The task group has removed Annex F, New Technology Qualification, out of 17N and put in “new” 17Q
- New document will include both reliability and integrity management.
- Negatives from ballot based on high level of repetition and the existence of inferred “shall” statements.
- Being structured to accommodate existing practices in place within the user community
- Subcommittee recommends, and confirms by straw vote, that the new 17N document be developed with no material that would be otherwise included in 17Q (voted 27 to 5 for removal).

l) API 17K: Specification for Bonded Flexible Pipe
- The Task Group report was given by Krassy Doynov (Attachment 20)
- Document is in development
- Design philosophy mirrors that of the recently updated 17J document.

m) API 17TR2: “The Ageing of PA-11 in Flexible Pipes”
- The Task Group report was given by Krassy Doynov (Attachment 20)
- JIP kicked off 2014. Progressing towards planned completion – 1Q2017
- Task Group Leader to submit SRRR form for revision to 17TR2, upon JIP completion in 2017

n) API 17L1: Specification for flexible pipe ancillary equipment
- The Task Group report was given by Krassy Doynov (Attachment 20)
- An erratum was issued under 17L1 in late 2015.
- The comments from the monogram program color coding of 17L1 will be incorporated into the revision of the document.

o) API 17J: Recommended practice for flexible pipe
- The Task Group report was given by Krassy Doynov (Attachment 20)
- API 17J 4th edition and API 17B 5th editions were published on May-2, 2014
- No outstanding actions

p) API 17D: Subsea Production System
- The Task Group report was given by Ross Frazer (Attachments 21 and 21a)
- Removal of PSL 3G and closure bolting was address in an addendum that was issued in late 2015
- Qualification testing of valves and actuators - Annex O
  - To propose an auditable definition for valve cycle
  - The task group had originally intended to release this work under Annex O as “Informative”
  - Ballot did not passed (64%, required 66%) with 144 comments.
  - The task group will continue to work on the ballot comment resolution, and consensus for cycle definition, in parallel with the development of the 3rd Edition of 17D
  - The effective date of definition of a cycle will take place 6 months after publication of the 3rd Edition of 17D; Chairman strongly encouraged all participants who might be impacted by the new definition to actively participate and provide input to the 17D Task
Group as they consider how cycles will be defined and implemented; singular definition of cycle may have significant impact on future valve qualification requirements and extensions to the effective date for 3rd Edition will not be considered.

- Metric/English conversion work is ongoing with two attempts to fix. This is a large project and the task group proposes to move to 3rd Edition API 17D

q) API 17E: Subsea Umbilical
   - The Task Group report was given by Daniel Harries (Attachment 22)
   - The document is out for ballot (closes February 8th)

r) API 17TR9: Subsea Umbilical Termination (SUT) Selection and Sizing Recommendations
   - The Task Group update was given by Ed Baniak
   - Work is done by consortium in Europe
   - 17TR9 - 1st ballot closed and the document is under comment review

s) API 17TR10: Subsea Umbilical Termination (SUT) Selection and Sizing Recommendations
   - The Task Group update was given by Ed Baniak
   - The document published in late December 2015

t) API 17H: ROV Intervention
   - The Task Group report was given by Charles White (Attachments 23 and 23a)
   - Inquiries received for 17H 2nd Edition (June 2013) for clarifications of:
     - Quality requirements for hot stab (users were applying them as machine drawings rather than interface drawings)
   - Task group developed a TR (17TR15) to reconcile the issues
     - Normalize the drawings
     - Clarify the intent of the drawings as interface drawings
     - Adopt new strategy to control the recepticle dimensions
     - Allow more freedom for manufactures to innovate male hot stab designs while maintaining subsea interchangeability
   - 17TR15 is under ballot now (closes January 18th)
   - Contents of technical report will be incorporated into 3rd Edition API 17H
   - AUV is to be incorporated into the 3rd Edition of API 17H

u) API 17P: Subsea Structures and Manifolds
   - The Task Group report was given by Charles White (Attachments 24 and 24a)
   - New TOC recommended by API Legal for 2nd Edition
   - Update and rationalize the materials section. Need assistance to complete the material section
   - Consider outstanding comments left from the previous edition
   - Add references to recently released recommended practice
   - Outstanding comments from the 1st Edition will be addressed as well.
   - API 17P - 2nd Edition should be completed in 2017

v) API 17R: Flowline Connections
   - The Task Group update was given by Ron Pfluger
   - Published in March 2015
   - No outstanding action

w) API 17S: Subsea Metering
   - The Task Group update was given by John Bednar
   - API 17S published in June 2015
• No outstanding actions

x) API 17U: Wet and Dry Thermal Insulation
• The Task Group update was given by Aquiles Perez [by phone]
• API 17U published in February 2015
• No outstanding action

y) API 17X: Recommended Practice on Subsea Pumping Systems
• The Task Group report was given by Larry Forster (Attachments 25)
• Document in 5 sections
• John Vicic is managing the development of standard
• Draft standard for review is planned for April 2016. The goal of the ballot to be determined in consultation with API.

z) API 17Z: Bonded Composite Pipe
• The Task Group report was given by Man Pham (Attachment 26)
• DNVGL will be required to provide formal approval for API to use DNV RP as basis for 17Z
• Action: Task group chair to confirm with Ed Baniak for handover legality of DNVGL JIP work to API
• API SC17 Leadership Team needs to check in with Task Group Leader regarding progress as no Task Report was submitted for API 17Z.

aa) API 17TR7: Performance Validation (Qualification) of Subsea Connectors
• The Task Group report was given by Jim Kaculi (Attachment 27)
• Task Group has monthly meetings
• Making good progress with use of four work groups
• Goal to have document completed by summer 2016

bb) API 17TR8: HPHT Design Guidelines
• The Task Group report was given by Brian Skeels (Attachments 28, 28a and 28b)
• The task group has been subdivided into eight work/study groups, each tackling a portion of the work scope.
• These work groups have been independently meeting and preparing their own working drafts since the April meeting.
• The revision is staying true in content to the original document.
• Intent to have draft ready for review by Q3 2016.

18. Actions items were reviewed and updated during the course of the meeting.

19. New business:
   a. SRRR to be taken to CSOEM for 17Q
   b. 17G3 and 17TR14 to be removed (to be brought to CSOEM).

20. Upcoming Meeting:
   • 2016 API Exploration and Production Standards Conference on Oilfield Equipment and Materials, Summer Meeting, Washington, DC June 2016
   • 2017 SC17 Meeting, Houston, TX January 2017

21. The meeting adjourned at 2:20 pm