API SC 17
SUBCOMMITTEE ON SUBSEA PRODUCTION SYSTEMS

API 17D/ISO 13628-4 Subsea Wellheads and Christmas Trees
JOINT TASK GROUP STATUS

18 JANUARY 2011
1. INTRODUCTION

The API 17D task group has developed a second edition of the specification, combining ISO 13628-4 and API 17D into a second edition of 13628-4. That ISO document has been fully balloted & accepted. Additionally, an API adopt-back ballot is now underway which will, if passed, create the second edition of 17D. Items considered in the new edition of the specification include:

- Revised information on gaskets and flanges
- Addressed GLL and HXTs
- Revised mudline equipment definitions
- Updated pressure testing and qualification criteria
- Added annexes on flange bolting, material compatibility testing, lifting padeyes, hyperbaric testing and connector qualification testing (ultimately removed – see further information below)
- Pressure ranges (limit to 15k equipment)
- Updated PSL, material class and temperature class
- Clarified and supported wellhead annular monitoring requirements
- Consideration of use of differential pressure in design of subsea equipment within the document’s scope.

2. RECAP & STATUS

The task group developed and released the first DIS of the updated specification on 26 September 2006. Voting closed on this specification on 28 February 2007. The review resulted in 113 pages of comments. In retrospect, that is not surprising given that the specification has not been fully updated since its original edition.

The task group completed consideration of those comments in June 2008. The sheer number of remarks prompted the TG to recommend that a second DIS be issued for review. With considerable help from API staff, the TG incorporated those comments into the previous version and issued the second DIS to the secretariat in October 2008.

The second DIS was fully reviewed and accepted by all of the member groups that voted (ten out of ten). Balloting closed on 06 February 2009 and 35 pages of comments were returned to the TG for consideration. Those were reviewed and closed out on 25 June 2009. API staff incorporated the TG’s review results into the second DIS and forwarded it to the ISO Secretariat the following month.

ISO returned the updated draft to the TG in August 2009 after conducting a consistency review. The results of that effort were included in the correspondence along with a request that the TG review the 334 ISO notations. It is important to note that a small number of these were judged to be potentially technical in nature.
The items were sorted into three categories with the highest level being those with the most potential effect. These broke down as listed below:

- First priority – 34
- Second priority – 111
- Third priority – 190

TG completed review of the first two categories 10 Feb 2010. A decision was made to accept the API Standards Staff’s view that the remaining level constituted purely editorial changes. Additional time was taken to more fully review some of the proposed annexes (notably K – Design and Testing of Padeyes for Lifting and L – Hyperbaric Testing Guidelines) and other text before returning the comment results to API’s Washington staff on 24 March 2010.

API staff incorporated the TG’s results into the document and updated many of the figures to ISO format. That work was complete and the document sent to ISO on 04 May 2010.

ISO returned the document with additional comments on 15 Jun 2010. These were largely editorial but still required review by a focused portion of the TG. That work was combined with the summer standards meeting and resubmitted to ISO on 21 Jul 2010. Additional work was required with ISO to complete housekeeping. ISO completed that exercise and posted the document for ballot on 16 Sept 2010. It passed muster and was published on 15 Dec 2010.

The standard was posted for API adopt-back on 20 Dec 2010 and that ballot will close 02 Feb 2011.

The same previously mentioned focused group of the TG has begun the work necessary to make the document fit the API monogram program.

**Differential Pressure Consideration**

Shortly before receiving the results of the first DIS balloting, the SC 17 leadership requested the task group consider the treatment of differential pressure in the design process for equipment that is in the specification’s scope. Considerable effort has been put into understanding the implications of using differential pressure in the design process and much discussion has taken place. This has occurred not only within the TG itself as broad participation from the subsea community has been encouraged given that the potential influences on subsea equipment design are far reaching. The TG has elected to release a technical report (“TR”) under the API banner which will provide a high-level outline of the considerations that should be made if a user elects to consider differential pressure in their design.

The first draft of the TR has been balloted and accepted. The original authors are currently working to incorporate the comments from the balloting into the second draft. For the purpose of API 17D/ISO 13628-4, pressure ratings shall be interpreted as rated
working pressure (as defined in clause 3.1.41 of the specification). It was originally planned that the TR be referenced in the forward of API 17D/ISO 13628-4. However, the authors’ workload in 2010 did not accommodate their completing the work necessary to accomplish that.

Ancillary Activities

The TG is also following the ECS task group on the changes to the ASME Section VIII, Division 2 pressure vessel code and what effects it may have on the current document.

During the final review of comments in June 2009, the TG elected to remove the then current Annex L (Performance verification (qualification) of wellhead connectors) and its references from the document. This decision was based on the TG’s opinion that there currently exists a substantial body of evidence demonstrating the robustness of current tree, tubing head and tree-cap connectors. However, the TG also voted that the SC 17 leadership review the connector qualification guidelines in the light of subsea trees, subsea wellheads and the newly formed flowline connector task group. At the January 2010 SC 17 meeting, it was recommended that the annex take the form of a technical report recommending the standardized qualification testing to certain structural loading conditions with and without pressure inside to provide uniform data needed in structural and riser analyses. The work on this technical report is currently slated to begin 21 Jan 2011 and it will be done in conjunction with SC 16 members.
3. MEMBERSHIP

The current membership is tabulated below

**API 17D/ISO 13628-4 TASK GROUP MEMBERS (January 2010)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ross Frazer</td>
<td>ATP Oil &amp; Gas</td>
<td><a href="mailto:rfrazer@atpog.com">rfrazer@atpog.com</a></td>
</tr>
<tr>
<td>Brian Skeels</td>
<td>FMC Technologies</td>
<td><a href="mailto:brian.skeels@fmcti.com">brian.skeels@fmcti.com</a></td>
</tr>
<tr>
<td>Tom Ames</td>
<td>BP</td>
<td><a href="mailto:amest@bp.com">amest@bp.com</a></td>
</tr>
<tr>
<td>Don Wells</td>
<td>Hess Corporation</td>
<td><a href="mailto:Don.Wells@Hess.com">Don.Wells@Hess.com</a></td>
</tr>
<tr>
<td>Gary Hurta</td>
<td>Dril-Quip</td>
<td><a href="mailto:gary_hurta@dril-quip.com">gary_hurta@dril-quip.com</a></td>
</tr>
<tr>
<td>Bill Parks</td>
<td>DTC International</td>
<td><a href="mailto:bill.parks@dtc-houston.com">bill.parks@dtc-houston.com</a></td>
</tr>
<tr>
<td>Dave Morgan</td>
<td>Cameron</td>
<td><a href="mailto:david.morgan@c-a-m.com">david.morgan@c-a-m.com</a></td>
</tr>
<tr>
<td>Paul Sommerfield</td>
<td>ExxonMobil</td>
<td><a href="mailto:paul.sommerfield@exxonmobil.com">paul.sommerfield@exxonmobil.com</a></td>
</tr>
<tr>
<td>Russell Hoshman</td>
<td>BOEMRE</td>
<td><a href="mailto:russell.hoshman@boemre.gov">russell.hoshman@boemre.gov</a></td>
</tr>
<tr>
<td>Scott C. Stjernstrom</td>
<td>Chevron</td>
<td><a href="mailto:Scott.stj@chevron.com">Scott.stj@chevron.com</a></td>
</tr>
<tr>
<td>Terry Cook</td>
<td>Shell</td>
<td><a href="mailto:Terry.cook@shell.com">Terry.cook@shell.com</a></td>
</tr>
<tr>
<td>Glen Cuiper</td>
<td>Aker Solutions</td>
<td><a href="mailto:glen.cuiper@akersolutions.com">glen.cuiper@akersolutions.com</a></td>
</tr>
<tr>
<td>Bobby Voss</td>
<td>GE</td>
<td><a href="mailto:bobby.voss@ge.com">bobby.voss@ge.com</a></td>
</tr>
<tr>
<td>Eric Wehner</td>
<td>NOV</td>
<td><a href="mailto:eric.wehner@nov.com">eric.wehner@nov.com</a></td>
</tr>
<tr>
<td>Ron Pfluger</td>
<td>Cameron</td>
<td><a href="mailto:ron.pfluger@c-a-m.com">ron.pfluger@c-a-m.com</a></td>
</tr>
<tr>
<td>Mike Conner</td>
<td>BOEMRE</td>
<td><a href="mailto:george.conner@boemre.gov">george.conner@boemre.gov</a></td>
</tr>
<tr>
<td>Ryan Herbel</td>
<td>GE</td>
<td><a href="mailto:ryan.herbel@ge.com">ryan.herbel@ge.com</a></td>
</tr>
</tbody>
</table>

**Alternates**

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
<th>E-Mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Conner</td>
<td>BOEMRE</td>
<td><a href="mailto:george.conner@boemre.gov">george.conner@boemre.gov</a></td>
</tr>
</tbody>
</table>

4. TARGET DATES FOR DELIVERABLES

ISO’s publication of the document closed that chapter of the TG’s scope.

Adopt-back by API is the next step. The specification was posted for this ballot 20 Dec 2011 and that ballot closes 02 Feb 2011.

5. MAJOR ISSUES

None known.

6. ANTICIPATED NEW WORK ITEMS

None known.

7. PLANS FOR FUTURE MEETINGS

None at this time.
8. RESOURCE NEEDS

None at this time.