

18th Joint Meeting of ISO/TC67/SC4/WG6 and API SC17  
Moody Gardens Hotel – Subsea Tieback Forum  
Galveston, TX

**March 3, 2005 – Joint Meeting - 8:30 am**

1. Opening of the meeting (*Bednar/Inderberg*)
2. Roll call/Roster Update (*Jordan*)
3. Adoption of the proposed agenda (*Bednar/Inderberg*)
4. Adoption of the minutes from 17<sup>th</sup> joint meeting (*Bednar/Inderberg*)
5. Status and action plan update (***See Attached Action Items***)
6. Task Group/Project Group Reports (***See Attached Work Program***)
  - A. Subsea Production Systems (API TG7)
    - Introduction of New API Task Group Chairman (*Bednar*)
    - API RP 17A 4<sup>th</sup> Edition/ ISO 13628-1:2005 Published Jan 2006
  - B. Flexible Pipe (API TG1) (*Doynov*)
    - ISO 13628-2/API Spec 17J & ISO 13628-11/API RP 17B – report on progress and status of JIP to update standards
    - Spec 17K 2<sup>nd</sup> Edition/ISO 13628-10 – Published Nov 2005
    - 17L - Flexible Pipe Ancillary Equipment JIP – report on progress to date
  - C. TFL Systems (API TG6) (*Yonker*)
    - ISO 13628-3/API RP 17C – Report on ballot to reaffirm
  - D. Subsea Wellheads/Tree (API TG5) (*Frazer/Skeels*)
    - ISO Spec 13628-4 – report on progress of DIS preparation
  - E. Umbilicals (API TG4) (*McManus*)
    - ISO 13628-5/API Spec 17E - report on progress of revision
  - F. Control Systems (API TG 2) (*Neuenkirchen*)
    - ISO 13628-6/API Spec 17F – report on FDIS ballot
  - G. Completion/Workover Risers (*Skeels*)
    - ISO 13628-7/API RP 17G – report on FDIS & API Adoption ballots
  - H. ROV/ROT (API TG3) (*White*)
    - ISO 13628-8 and -9/API RP 17H and RP 17M – report on progress of NWI to combine documents into one standard
  - I. Dynamic Risers (*Stanton*)
    - ISO 16389/API RP 2RD – report on status of revision
  - J. Subsea Reliability RP (*Allen*)
    - Update on RP17N activity
  - K. HIPPS RP (*Goggans*)
    - Update on RP17O activity
  - L. Templates and Manifolds (*Whipple*)
    - Update on 17P activity
  - M. Subsea System Engineering (*tbd*)
    - Update on 17Q activity
  - N. Materials Study Group (*Haerberle*)
    - Update on activity
7. Suggestions for new work items and amendments to existing standards
  - Composite Suite of API/ISO subsea standards and gaps in existing standards (*Bednar/Inderberg*)
  - Report on Path Forward for Insulation and Buoyancy Spec and RP (*Wilkinson*)
8. Other Business
  - ?
9. Review of Action Items
10. Next meeting – At API Summer Standards Conference, Atlanta Hilton, June 12-16, Atlanta, Georgia

## ISO SC4/WG6 / API SC17 Action Items

Prepared for March 3, 2006 Joint Meeting

Standard/ Subject	Action Item	Last Update	Current Status <i>(items in <b>bold</b> are complete)</i>
<b>General Requirements</b>  <b>13628-1 (17A)</b>	2004-14: Form a team to look at the scope of 17A/13628-1 with regard to these items and other new work topics as they relate to the composite suite of subsea standards. Some of the topics to be covered include: <ul style="list-style-type: none"> <li>• Systems Engineering</li> <li>• Subsea processing</li> <li>• Multiphase pumping</li> <li>• Intelligent wells interfacing</li> <li>• Interaction between flowlines and subsea structures</li> <li>• Integrated Production Umbilical (IPUs)</li> <li>• Spec breaks</li> <li>• Existing flowline specifications and their relationship/applications to SC17</li> </ul>	6/29/05 - Ongoing. A one-day session on this topic is planned prior to the next joint meeting.	9/30/05 – Ongoing.  Olav Inderberg to follow-up on possible NWI for an RPIW interfacing  Discussion to be held at March meeting for planning of a separate session on this topic
	2005-1: John Bednar, Olav Inderberg, and Andy Radford will contact Ted Zaleski at ISO SC4 and encourage him to release this document for ballot.	2/3/05 – New Action Item	<b>Complete. Will be removed following March meeting</b>
	2005-9: Leadership Team to identify candidates to replace Vince Vetter as 17A TG chair.	9/30/05 – New Action Item	Jan 06 – Bruce Crager identifies Luiz Sousa, Petrobras America
<b>Flexible Pipe</b>  <b>13628-2 (17J),</b>  <b>13628-10 (17K),</b>  <b>13628-11 (17B)</b>  <b>17L (Ancillary Equipment)</b>	2004-6: Olav Inderberg to prepare an ISO NWI based on the 17L work for consideration at the June meeting. He will ask Steve Groves (BP) to serve as ISO Project Leader.	6/29/05 - Ongoing	9/30/05 - Ongoing

<b>Standard/ Subject</b>	<b>Action Item</b>	<b>Last Update</b>	<b>Current Status</b> <i>(items in <b>bold</b> are complete)</i>
	2004-18: Krassimir Doynov to forward a draft of 17L (when draft is deemed ready for widespread release) to be used in the ISO new work item and this should include a proposed title and how it could also include umbilicals.	6/29/05 - Ongoing	9/30/05 – Ongoing  Dec 05 – D. Wilkinson to discuss with K. Doynov about API TG Chair
	2005-2: John Bednar, Olav Inderberg, and Andy Radford will contact Ted Zaleski at ISO SC4 and encourage him to release ISO 13628-10 (17K) for FDIS ballot.	2/3/05 New Action Item	<b>Complete. Will be removed following next meeting</b>
<b>TFL</b>  13628-3 (17C)	2005-3: Olav Inderberg/John Bednar to submit ISO 13628-3/17C for reaffirmation ballot through both ISO and API with no revisions.	2/3/05 – New Action Item	<b>Complete. Will be removed following next meeting</b>
<b>Subsea Wellheads and Trees</b>  13628-4 (17D)	2004-16: Brian Skeels/Ross Frazer to provide a report at the next meeting on the repair/remanufacture issue.	6/29/05 - Ongoing	9/30/05 – Ongoing 12/15/05 - Awaiting resolution of patent release letter issues
<b>Umbilicals</b>  13628-5 (17E)	<b>No outstanding action items</b>		
<b>Control Systems</b>  13628-6 (17F)	2004-17: Jens Henrik Neuenkirken and John Bodine to provide a report at the next meeting on a path forward for revisions to 13628-6.	2/3/05 – Ongoing	<b>Complete. Will be removed following next meeting</b> 10/05 Confirm J. Bodine (now w/ Chevron) to continue at TG Chair
	2005-10: Jonathan Jordan to contact John Bodince (now with Chevron) to discuss continuing role as API TG chair.		9/30/05 – New Action Item
<b>Comp./Work over Risers</b>  13628-7 (17G)	2005-4: John Bednar, Olav Inderberg, and Andy Radford will contact Ted Zaleski at ISO SC4 and encourage him to release this document for ballot.	2/3/05 New Action Item	<b>Complete. Will be removed following next meeting</b>
	2005-5: Brian Skeels will prepare New Work Item to form a new API task group related IWOCs with ISO participation. This will then be submitted Olav Inderberg to prepare an ISO New Work Item request before the June API meeting.	6/29/05 - Ongoing	9/30/05 - Ongoing
<b>ROVs</b>  13628-8 (17H)	<b>No outstanding action items</b>		

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<b>ROTs</b>  <b>13628-9</b> <b>(17M)</b>	2004-7: Charley White and Eric Luszi to develop an API NWI that details the path forward on combining 13628-8 and 13628-9 into one document and incorporating the additional items received in comments during the ISO ballots and the API adopt-back ballots.	6/29/05 - Ongoing	9/30/05 – Ongoing  12/15/05 – To be combined into a new -13 document
<b>17N (Subsea Reliability)</b>	2004-8: Olav Inderberg and John Allen to provide a Report at the next meeting concerning the recent ISO NWI on Regularity management and reliability technology (see N861 at the following website - <a href="http://committees.api.org/standards/isotc67/n_doc_2003.html">http://committees.api.org/standards/isotc67/n_doc_2003.html</a> .) The report will explain how this NWI relates to the 17N work and how the activities will be coordinated. (see also Item 2004-20)	2/3/05 - Ongoing	<b>Complete. Will be removed following next meeting</b>
	2005-6: John Allen to submit a proposal to API for continued funding of the RP 17N work.	2/3/05 – New Action Item	<b>Complete. Will be removed following next meeting</b>
<b>HIPPS</b>  <b>17O</b>	<b>No outstanding action items</b>	9/05 Discussion on adding to ISO workplan	
<b>Templates and Manifolds</b>  <b>17P</b>	2004-10: Olav Inderberg to solicit non-US participants.	2/3/05 - Ongoing	<b>Complete. Will be removed following next meeting</b>
	2004-23: Olav Inderberg to initiate an ISO NWI on this subject.	6/29/05 - Ongoing	9/30/05 - Ongoing
	2005-7: Jeff Whipple to circulate an electronic draft to 17P members for review. Olav Inderberg will send this draft to interested ISO members. Andy Radford to post on API SC 17 website.	6/29/05 - Ongoing	9/30/05 - Ongoing
	2005-11: David Wilkinson to contact Jeff Whipple to check on status of 17P project.	9/30/05 - New	12/15/05 – Workshops ongoing
<b>System Engineering</b>  <b>17Q</b>	2005-8: Revisit Systems Engineering in June 2005 and determine if there is a champion. All SC17 members are requested to consider who might be involved with this effort.	6/29/05 - Ongoing	9/30/05 – Ongoing  12/15/05 – No candidate identified

<b>Standard/ Subject</b>	<b>Action Item</b>	<b>Last Update</b>	<b>Current Status</b> <i>(items in <b>bold</b> are complete)</i>
<b>16389 (API RP 2RD) Dynamic Risers</b>	2005-5: Paul Stanton to ask SC2 in February if they would like to put this document in SC17.	2/3/05 – New Action Item	<b>Complete. Will be removed following next meeting</b>
<b>General/ Admin.</b>	2002-23: Alf Reidar Johansen will prepare a document outlining how ISO and API will work together to ensure that the standards work is well coordinated. This document will provide guidance on how both groups should handle comments made on the various documents throughout the development/ review process.	6/29/05 - Ongoing	9/30/05 – Ongoing  12/15/05 – Document drafted but not ratified. Possibly to drop item.
	2003-20: Dave Wilkinson distributed copies of suggested "rationalised" pressure definitions to SC17/WG6 members present. Dave will forward this document electronically to Andy Radford for email distribution to all SC17 members, seeking feedback. Andy will include a note in the email alerting SC17 members to the presence of N172 on the API website and the need to stay with established definitions wherever possible when revising/generating documents.	2/3/05 – Ongoing. Andy Radford to attach N172 to minutes and request feedback to David Wilkinson before the June 2005 meeting.	<b>6/29/05 – Complete – Moved to Permanent Items - Item 2003-21. Will be removed following next meeting</b>
	2004-25: Leadership team to explore ways to get information out to industry in a more timely manner.	6/29/05 - Ongoing	9/30/05 - Ongoing
<b>Permanent Discussion Items</b>	2001-18: John Bednar, Gary Hurta, and Olav Inderberg are to look at the direction that SC17 should be pursuing relative to the composite suite of API 17 Series general and specific documents that address the broad spectrum of subsea hardware.	6/29/05 - Ongoing	9/30/05 - Ongoing
	2003-8: SC17 Leadership Team to discuss how experiences gained when using the standards/specifications are captured and fed into future revisions.	6/29/05 - Ongoing	9/30/05 – Ongoing  Jan 06 – General agreement to set up a system to track experiences, but details not yet defined
	2003-21: Maintenance of N172.	6/29/05 – Ongoing. Alf-Reidar Johansen will submit an updated version of N172 for distribution.	9/30/05 - Ongoing

<b>Standard/ Subject</b>	<b>Action Item</b>	<b>Last Update</b>	<b>Current Status</b> <i>(items in <b>bold</b> are complete)</i>
<b>New Work</b>	2003-22: Brian Skeels to develop a plan for dealing with HPHT issues for subsea production system standards, addressing: - what areas should be covered in terms of equipment and procedures; - how this would best be integrated into the SC17 documents e.g. stand alone document versus HPHT Annexes in each existing document; - what else is going on in the industry in this regard e.g. API sponsorship of testing of effects of HT on material properties.	6/29/05 – AN API Task Group has been formed to address High Pressure/High Temperature (Over 15,000 psi) equipment. SC17 will be kept up to date on the task group's activity.	9/30/05 – Ongoing  12/15/05 – Ongoing – Multi-SC Task Group is developing a tentative draft of proposed “API RP 6HP”
	2004-13: Dave Wilkinson, John Bednar, and Andy Radford to determine path forward for Insulation and Buoyancy standards prior to the June meeting.	6/29/05 – Andy Radford to send out MCS reports which are to be balloted as API Technical Reports.  Andy will send MCS the API comments on the documents. He will ask MCS to find a champion to develop the MCS report to an RP and Specification.	9/30/05 – Ongoing  1/15/06 – Mike Given, Vetco to review MCS documents and provide recommendation on TR
	2004-26: Rick Hill to review existing flowline specifications and their relationship/applications to SC17.	2/3/05 - Ongoing	<b>6/29/05 – Complete. will be added to list to be addressed by –1 (Item 2004-14). Will be removed following next meeting.</b>
	2004-27: Brian Skeels to report on materials issue with respect to NACE MR0175 (ISO 15156 – all parts).	2/3/05 - Ongoing	<b>6/29/05 – Complete. Will be incorporated into the ISO 13628-4 document. Will be removed following next meeting.</b>

**API C2 /SC17 (ISO TC67/SC4/WG6), SUBCOMMITTEE ON SUBSEA PRODUCTION SYSTEMS**

**2006 WORK PROGRAM**

**Revised February 2006**

BRIEF DESCRIPTION OF WORK/SCOPE	API Standard	ISO Standard	API Chair	ISO Project Leader	SC17 Leadership Team Champion	STATUS
Design and operation of subsea systems	RP 17A	13628-1	Luiz Sousa, Petrobras America (TG7)	Per Dahl, Statoil	Wilkinson	Published (Jan 2006)
Flexible pipe	RP 17B	10420 Proposed as 13628-11	Krassimir Doynov, ExxonMobil (TG1)	Krassimir Doynov, ExxonMobil	Wilkinson	ISO DIS ballot complete. Comment resolution being incorporated.
TFL systems	RP 17C	13628-3	John Yonker, Halliburton (TG6)	John Yonker, Halliburton	Hurta	API RP17C/ISO 13628-3 published. Reaffirmation ballot passed. No action needed at this time.
Subsea wellhead and tree equipment	Spec 17D	13628-4	Ross Frazer, ATP Vice Chair: Brian Skeels, FMC (TG5)	Ross Frazer, ATP Vice Chair: Brian Skeels, FMC	Hurta	Work ongoing. Preparing for DIS submission. Resolution of patent release letters in progress.
Production control umbilicals	Spec 17E	13628-5	John McManus, Gibson Tube (TG4)	Ron Dee, Shell	Crager	ISO NWI approved. Work on next revision ongoing.
Subsea controls	Spec 17F	13628-6	John Bodine, Chevron (TG2)	Jens Neuenkirken, Statoil	Bednar	ISO FDIS ballot closes March 19 (API TAG ballot closes March 10). API Adopt-back Ballot closes March 29.
Design & operation of completion/workover risers	RP 17G	13628-7	Brian Skeels, FMC	Anthony Muff, FMC	Hurta	FDIS ballot skipped per ISO SC4 Resolution. API adopt-back ballot passed.
ROV interfaces	RP 17H	13628-8	Tim Marsh, Shell (TG3)	Tim Marsh, Shell Eric Luszi, Statoil	Hurta	ISO 13628-8/API 17H published.
Unbonded flexible pipe	Spec 17J	13628-2	Krassimir Doynov, Exxon Mobil (TG1)	Krassimir Doynov, Exxon Mobil	Wilkinson	ISO DIS ballot complete. Comment resolutions being processed.
Bonded flexible pipe	Spec 17K	13628-10	Krassimir Doynov, ExxonMobil (TG1)	Krassimir Doynov, Exxon Mobil	Wilkinson	Second Ed Published Nov 2005.

BRIEF DESCRIPTION OF WORK/SCOPE	API Standard	ISO Standard	API Chair	ISO Project Leader	SC17 Leadership Team Champion	STATUS
Flexible Pipe Ancillary Equipment (Spec)	Spec 17L1	TBD	Steve Groves, BP (to be confirmed)	TBD	Wilkinson	MCS JIP ongoing. API contribution \$10,000. 1 <sup>st</sup> draft under review.
Flexible Pipe Ancillary Equipment (RP)	RP 17L2	TBD	Steve Groves, BP (to be confirmed)	TBD	Wilkinson	MCS JIP ongoing. API contributed an additional \$4,000 to cover RP development (increase in project scope). 1 <sup>st</sup> draft under review.
ROT Intervention System	RP 17M	13628-9	Charley White, ABB	Eric Luszi, Statoil	Crager	Considering NWI to combine with 13628-8
Dynamic Risers	RP2RD	16389	Paul Stanton, Technip	Paul Stanton, Technip	Bednar	Work ongoing.
Subsea Reliability	RP 17N	TBD	John Allen, Vetco-Grey	Olav Inderberg, FMC	Crager	Work ongoing.
HIPPS	17O	TBD	Tim Goggans, FMC	Tim Goggans, FMC	Bednar	Work ongoing.
Templates and Manifolds	17P	TBD	Jeff Whipple, Intec	TBD	Wilkinson	Work ongoing.
Systems Engineering	17Q	TBD	(-TBD-)	Olav Inderberg, FMC	Wilkinson	Decision on continuing this project is pending discussion at next meeting.
Materials Study Group	n/a	annexes to existing	Tim Haerberle, Vetco-Grey	Ragnar Mollan, Norsk Hydro	Inderberg	Generating annex materials for 17A (-1) and 17P