

API C2 / SC 17
SUBCOMMITTEE ON SUBSEA PRODUCTION SYSTEMS

STATUS
OF
API 17J,B,K AND ISO 13628 -2,11,10
FLEXIBLE PIPE STANDARDS

JOINT API-ISO FLEXIBLE PIPE TASK GROUP

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1. INTRODUCTION

The joint API-ISO Flexible Pipe Task Group (FPTG) is an international group of Subject Matter Experts (SME) representing the flexible pipe community worldwide, whose tasks are to address all technical comments arising from revisions and updates of the flexible pipe standards, and to provide smooth transition between:

*ISO 13628-11: Flexible pipe systems for subsea and marine applications, and
API RP 17B, Recommended practice for flexible pipe, Third edition, March 2002*

*ISO 13628-2: Unbonded flexible pipe systems for subsea and marine applications, and
API 17J, Specification for Unbonded Flexible Pipe, Second edition, November 1999*

*ISO 13628-10: Bonded flexible pipe, and
API 17K, Specification for Bonded Flexible Pipe, First edition, March 2002*

by maintaining the technical content Identical. This report contains comments on the completion of the scope of work, as well as presents the status of the:

- a) Ancillary Equipment JIP aimed at the creation of draft for API 17L1 and L2 standards,
- b) Flexible Pipe Technology JIP whose purpose is the next revision of the ISO 13628-2/-11 and API 17 J/B standards, intended for the 2008/2009 timeframe.

2. CURRENT STATUS

The flexible pipe ISO standards are based on, and improve the API standard revisions mentioned above, by virtue of addressing a number of comments received in that process. The flexible pipe community desire is to back adopt the improvements made in the ISO standards into next API standard revisions, to facilitate the use of flexibles worldwide.

The ISO 13628-10 was published on October-1, 2005, while the identical API 17K was published on November-1, 2005.

The ISO 13628-2 was published on July-12, 2006. This process included a 2-month FDIS voting. In principle, only comments of editorial nature are allowed after FDIS voting, while technical comments are not allowed. After the FDIS voting, the FPTG was involved in resolving one issue – finding a substitute for a reference to an old ASTM

D671 standard that was discontinued in 2002 without replacement. While this issue was identified as editorial, it was probably of a mixed editorial/technical nature since it was resolved practically with the help of the FPTG. This example highlights the need of a transparent documentation of all changes made to the standard after FDIS voting, to facilitate the back adoption into API 17J standard. Identical API 17J standard is yet to be published.

The preparation of the ISO/FDIS 13628-11 document was delayed practically for 6-7 months due to delays in editing all Figures (see Lessons Learned section for details). The ISO/FDIS 13628-11 document was accepted by ISO Central Secretariat for FDIS processing on January-12, 2007. As advised by Alain Samne of the ISO Central Secretariat, it takes 2.5 to 3-months to launch the 2-month FDIS ballot, or 5.5 to 6 months to Publication, meaning that the ISO 13628-11 standard is expected to be published around July 2007.

The Ancillary Equipment JIP is completed. The JIP manager MCS is expected to the draft proposals for API Specification 17L1, and API Recommended Practice 17L2 standards by the end of February, 2007.

The Flexible Pipe Technology JIP, whose purpose is the next revision of the ISO 13628-2/-11 and API 17 J/B standards within the 2008/2009 timeframe, has 19 participants – manufacturers, operators, service companies, regulators and standardization bodies – a very broad Industry representation worldwide. The JIP was kicked off in January 2005 and is about to be completed in 2007. The JIP main task is to work on resolving the most challenging issues associate mostly with deepwater applications, which cannot be resolved by simple e-mail correspondence. The final deliverables of the FPT JIP is draft proposals for the next revision of the API and ISO standards mentioned above.

3. MEMBERSHIP

The list of the subject matter experts volunteering their time to support the Flexible Pipe Task Group (FPTG) activities is provided in the table shown below. This list is being updated only when the FPTG Chair receives a request for that from a Subject Matter Expert (SME), Company, or Country with a stake in the development of the ISO 13628-2/-10/-11 standards. Most of the requests are usually for the replacement of one SME with another SME from the same institution. This list is a reflection of all companies with

**API 17 B,J,K,L & ISO 13628-11,2,10 FLEXIBLE PIPE STANDARDS
2007 WINTER MEETING STATUS REPORT**

a stake Table 2 and notable presence Table 1 in the International flexible pipe user community.

List of Subject Matter Experts actively participating in the FPTG activities			
No.	Name	Company	E-mail address
1.	Krassimir Doynov	ExxonMobil Development Co.	krassimir.doynov@exxonmobil.com
2.	Kent Caveny	ExxonMobil Development Co.	kent.p.caveny@exxonmobil.com
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4.	Antoine Felix Henry	Technip - Flexi France	afelixhenry@technip.com
5.	Jean Rigaud	Technip - Flexi France	jrigaud@technip.com
6.	Zhimin Tan	Wellstream Inc.	zhimin.tan@wellstream.com
7.	Paul Lewicki	Wellstream Inc.	paul.lewicki@wellstream.com
8.	Terry Sheldrake	Wellstream Ltd.	terry.sheldrake@wellstream.com
9.	Niels Rishoj	NKT Flexibles	niels.rishoj@nktflexibles.com
10.	Mike Bryant	DeepFlex Inc.	mike.bryant@deepflex.com
11.	Tibor Nagy	Phoenix Rubber (Industrial) Ltd.	nagy.tibor@phoenix-rubber.hu
12.	Michael Werth	Atofina	michael.werth@atofina.com
13.	Thierry Roland Delahaye	Total	thierry-roland.delahaye@total.com
14.	Denis Melot	Total	denis.melot@total.com
15.	Trond Stokka Meling	Statoil	tsmeling@statoil.com
16.	Knut-Aril Farnes	Statoil	kafa@statoil.com
17.	Einar Oeren	Statoil	eoer@statoil.no
18.	Harald Thon	Norsk Hydro	harald.thon@hydro.com
19.	Jon Olav Bondevik	SeaFlex	jon.olav.bondevik@seaflex.no
20.	Rune Haakonsen	SeaFlex Riser Technology Inc.	rune.haakonsen@seaflex.com
21.	Chris Mungall	KBR	chris.mungall@halliburton.com
22.	Kam Zandiyeh	Dunlop Oil	Kam.Zandiyeh@dunoil.com

TABLE 1 LIST OF ACTIVE API-ISO FPTG MEMBERS

List of Subject Matter Experts invited to participate in the -2/-11 FPTG activities			
No.	Name	Company	E-mail address
23.	Jemei Chang	Shell Oil Company	jemei.chang@shell.com
24.	Ali Anaturk	Shell Oil Company	ali.anaturk@shell.com
25.	Neil Reeve	Shell Global Solutions	neil.reeve@shell.com
26.	Alan Bliault	Shell International E&P	alan.a.bliault@shell.com
27.	Dick Percy	BP Exploration	percyrj@bp.com
28.	Stephen Groves	BP Exploration	grovess2@bp.com
29.	Carlos Lemos	Petrobras	caolemos@petrobras.com.br

**API 17 B,J,K,L & ISO 13628-11,2,10 FLEXIBLE PIPE STANDARDS
2007 WINTER MEETING STATUS REPORT**

30.	Marcos Carpigiani	PetroBras	carpigiani@petrobras.com.br
31.	Renato Da Silva	PetroBras	rsilva@ep.petrobras.com.br
32.	Luiz Lobianco	PetroBras	lobianco@petrobras.com.br
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50.	Frank Grealish	MCS International	frankgrealish@mcs.com
51.	Kieran Kavanaugh	MCS International	kierankavanaugh@mcs.com
52.	Patrick O'Brien	MCS International	patrickobrien@mcs.com
53.	Michael O'Sullivan	MCS International	michaelosullivan@mcs.com
54.	Craig Redding	Southwest Research Institute	credding@swri.com
55.	George Wolfe	Southwest Research Institute	gwolfe@swri.org

**TABLE 2 LIST OF INVITED SME COPIED WITH FPTG
CORRESPONDENCE**

This FPTG list is subject to further modification based on the availability of the volunteering SMEs.

4. UPDATED TARGET DATES FOR DELIVERABLES

The target dates for the milestones described in Section 2 are:

- a) The 2-month FDIS voting on ISO 13628-11 is expected to start around March-April 2007. Publishing of ISO 13628-11 standard is expected in the Summer of 2007

- b) Submitting Ancillary Equipment standard draft proposals of API Specification 17L1 and API Recommended Practice 7L2, and requesting ISO New Work Items for these standards – Spring, 2007
- c) Preparing Flexible Pipe Technology proposals for the next revision of ISO 13628-2/-11 and API 17J/B – 2007/2008

5. LESSONS LEARNED

The previous experience with the revision of the ISO 13628-10 and API 17K standards has demonstrated the success of the formula of clearly defined and separated responsibilities of a technical leadership (FPTG Chair), and editorial leadership (API).

The preparation of the ISO/FDIS 13628-11 document was delayed practically for 6-7 months due to delays in editing of all Figures. The DIS document was assembled by more than one API editor due to job changes and/or rotations. The figure editing was subcontracted by the International Association of Oil and Gas Producers (OGP) to a contractor (Galbraith Consulting Ltd.) who consequently merged with another contractor - Poseidon International Ltd. The ISO/FDIS 13628-11 document is being edited by the ISO Central Secretariat. The lesson is that such 6-7 month delays can be perhaps avoided by :

- a) assigning a clearly defined editorial leadership,
 - b) outlining a matrix and schedule of agreed upon responsibilities spread out among all organizations (like API, OGP, ISO) supporting the editorial work.
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ISO FDIS voting process lasts two months. In principle, only comments of editorial nature are allowed after FDIS voting, while technical comments are not allowed. After the 13628-2 FDIS voting, the FPTG was involved in resolving one issue – finding a substitute for a reference to an old ASTM D671 standard that was discontinued in 2002 without replacement. While this issue was identified as editorial, it was probably of a mixed editorial/technical nature since it was resolved practically with the help of the FPTG.

It is documented in item 7, b), iii) of the MOM from Atlanta 2006 ISO-API meeting, that Motion was made and seconded “that SC17 initiate adopt back immediately for 13628-11 (perhaps a typo - 13628-2 should have been added too) in parallel with ISO when FDIS is completed. This is contingent that no changes are made without the approval of the respective API and ISO Committees.” The apparent condition for back adoption of API 17J is a transparent documentation of all changes made to the standard after FDIS voting. The imposing of this condition is supported by the 13628-2 example of the old ASTM D671 reference explained in the previous paragraph.

This second lesson highlights the need of a transparent documentation of all changes made to the standard after FDIS voting, to facilitate the back adoption into API standards.

6. ANTICIPATED NEW WORK ITEMS

Two draft proposals for API 17L1 “Ancillary Equipment” Specification and API 17L2 Recommended Practice standards are expected in Spring, 2007. Since these standards are about to compliment API 17 J/B/K ISO 13628-2/11/10 to provide the business framework for complete flexible pipe/ancillary equipment system, I expect the need of two NWI for corresponding ISO standards in the Summer of 2007.

7. PLANS FOR FUTURE MEETINGS

None at this time.

8. RESOURCE NEEDS

The FPT JIP is currently experimenting with an Internet Forum type discussion on the JIP manager’s web site. The three distinctive advantages of using the Internet Forum that surfaced up are:

- ability to continuously exchange opinions, and giving SMEs the chance to get familiar with and discuss competing points of view on controversial topics,

- the potential impact of shortening lengthy discussions during face-to-face meeting with a large group of SMEs seeking opportunity to share different lessons learned and offer unique perspective on a variety of controversial topics,
- providing transparency (and documentation) of arriving at a logic for making a final decision on technical comments.

These advantages are seen as a vehicle to accelerate the work of API-ISO FPTG, and perhaps decrease the need for interpretation of technical clauses accepted in the flexible pipe standards already published.

Thus, I request the establishment of an Internet Forum on the API SC17 website, and/or on the ISO TC67 SC4 WG6 website, for facilitating API-ISO FPTG future activities.

Alternatively, I expect to request some funding for using MCS Internet Forum, for the same FPTG purposes, in Summer, 2007.