

API17X Recommended Practice on Subsea Pumping Systems

Interim Report July 2014 to December 2014

John Vivic

Chairman

1. INTRODUCTION

An SRRR was prepared to develop a Recommended Practice on Subsea Pumping Systems and this was submitted to API by John Vicic, subcommittee chair in January of 2013. No funds were requested at the time. The request was endorsed by John Bednar, API chairman. The subcommittee work request was approved through June 2014.

Purpose:

Assist engineers working on designing subsea pumps (seabed deployed) and to provide guidance on minimum functional requirements, system description, common methods of the design steps, the engineering, reporting requirements and reliability considerations consistent with API 17.

The Recommended Practice (RP) is intended to provide: guidance to the design, qualification testing, factory acceptance testing and deployment of the subsea pumping system.

The RP will assist operators, suppliers and manufacturers to reach a common goal for the design of subsea pumps and thereby enable standardization of the design process.

Need/Opportunity:

Subsea pumping systems don't have governing standards or practices that can be used for guidance by the end users or the manufacturers:

Standardized Practices

Improved Reliability & Economics

Inherently Safer System

2. STATUS

The committee intent is to have alternating monthly face to face meetings for the full committee and call in meetings for the work group leads. This did not happen the last quarter of 2014 due to work schedules and time commitments. The [last full committee meeting was held July 14, 2014](#). A face to face meeting was held for European members at Statoil offices in Stavanger during INTSOK ONS 2014 [Sept. 26, 2014](#) wherein approximately 10 members attended. Statoil has volunteered their offices to facilitate video participation for future full committee face to face meetings.

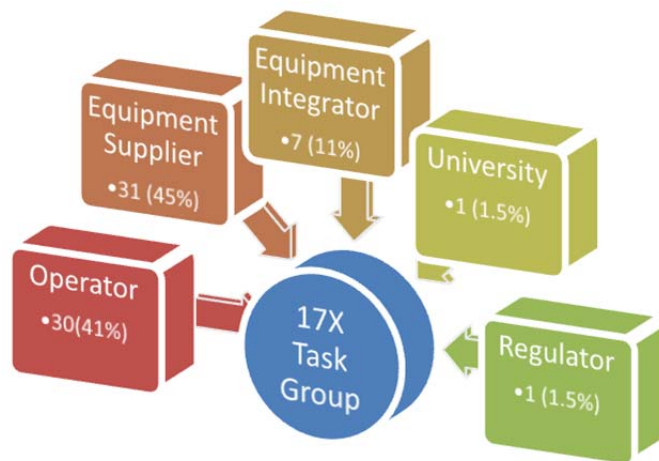
The API 17X committee is moving forward expeditiously, but slower than originally projected, and chapter drafts should be complete approximately end of January to mid February 2014. At this time, we would plan to pass the draft sections over to an integrator/editor to compile into a complete document. We are targeting to have this done by end of Q2 2015. Intecsea has

submitted a CTR for this work (attached) . The plan then is to circulate the document to the full membership for review and comment. The document then would be submitted to API 17 for further review and comment in Q4 2105.

17X Task Group

We have 70 members with global membership as of December 31, 2014.

- **Group Demographics**



Work Group	Group Lead/Liaison	Participants
Electrical & Power Distribution	Mike Zerkus	Charles Solhaug, Gautschy, Audon Tom-Arne Grynning
Pump Hydraulics	Yasser Bangash	BP
	Casillas, Hector Shell Global Solutions Lawson, Peter Baker Hughes Sam McJunkin Exxon Mobil Sundt Hans Kristian GE Leonardo Tognarelli GE Roland Maurischat Leistritz Corporation Jeffery F De Vault Leistritz Corporation Nils Arne One Subsea Scarsdale, Kevin Schlumberger Mark Allen Schlumberger Gerald Morrison Texas A & M Jarle Attar Hella StatOil Adams, Ron Sulzer Pumps Pierre-Jean BIBET Total Bangash, Yasser BP Adam Norberg Flowserve James T. McGuire Flowserve Alejandro Fratini Flowserve - EPO Alexander Fuglesang Fuglesangs Subsea Jarle Michaelson One Subsea	
Qualification & Testing	Taylor Green	Ole Okland - Statoil Terje Glomsaker - GE Lorenzo Bergamini - GE Michael Hughes - GE Gabriela Torres - ExxonMobil Stephen Lanier - ExxonMobil Jonah Margulis - Aker Solutions Klas Eriksson - Aker Solutions Kazu Kochi - Petrobras Thomas Felix - Sulzer
Mechanical & Structures	Chuck Horn	Craig Hume, Mauricio Da co Sta
Reliability & Intervention Worley Parsons	John	Allen
Genesis	Mike	Zerkus
Stat Oil	Rune	Mode Ramberg

GE	John	Friedemann
Astimar Ltd.	John	Strutt
Aker Solutions	Klas	Eriksson
ConocoPhillips	John	Vicic
BP	Yasser	Bangash
INTECSEA, Inc.	Rebecca	Roth
ExxonMobil	Schnatzmeyer	Mark
Shell Global Solutions	Adrian	Williams

Taylor Green is leaving BP and we are looking for a replacement from the Qualification & Testing work group to fill the task lead role.

- Electrical & Power
 - Motor Technology
 - Power distribution
 - Controls and CM
- Pump Hydraulics
 - Pump Performance Testing and Reporting
 - Fluids for testing (Liquid and Gas)
- Mechanical/Structures
 - Design of Mechanical Components
 - Flow Modules/Manifolds/Connections
 - Pressure Housing Design Codes-Loss of Containment
- Qualification & Testing
 - System and Component Qualification
 - Factory Acceptance Testing

- Reliability & Intervention
 - System and component level Reliability testing
 - Reliability requirements
 - Economic impact of reliability
 - Intervention technology

The monthly work group teleconferences have been held regularly.

3. UPDATED TARGET DATES FOR DELIVERABLES

Table 4-1 shows the new proposed milestone targets:

TABLE 4-1: MILESTONE TARGET DATES

Milestone Targets	Proposed Completion Date
SRRR Form Submitted	January , 2013 – Completed
Draft Standard Available for review	April 2015
Draft Standard Available for Ballot	September 2015
Publication of API Revised Recommended Practice	January 2016

4. MAJOR ISSUES

There needs to be continued coordination between 17X with 17N, 17Q and 17A regarding clarification of definitions for qualification, verification and validation. Misinterpretation of these definitions has the potential to cause serious confusion amongst this recommended practice and others. The subcommittee has agreed we will coordinate our work with API 17N, API 17Q, API 17A, DNV 203 through engagement by overlapping members.

5. ANTICIPATED NEW WORK ITEMS

We need to obtain editorial assistance starting January 2015.

6. PLANS FOR FUTURE MEETINGS

Continuing monthly meetings, or sooner as required, will be held by work groups and the committee until completion. Full committee bi-monthly, call in on alternate months

The next full TG meeting will be held late January 2015.

The committee plans to publicize our activities at the next Multi Phase Users Roundtable (MPUR) – see attached,

7. RESOURCE NEEDS

Editorial assistance will be needed to pull together the final document starting January 2015 (previously approved SRRR) with not to exceed budget of \$60,000 until document completion. The full committee agreed to accept Intecsea as editor based on capabilities and experience in the area. If this is not available, the milestones may shift further right 6 months to 9 months.



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