API Subcommittee 17
Industry Standards for Subsea Equipment

John M. Bednar – BP
API SC17 Chairman
Message

• Overview of API Subcommittee 17 Subsea
  – Organization / Membership
  – Suite of Subsea Standards
• Current Focus Areas
Subcommittee 17 Subsea Membership

• 79 Subcommittee Members
• 26 Voting Members
  ➢ Operators:
    Anadarko, ATP, BHP, BP, Chevron, ENI, ExxonMobil, Hess, Petrobras America, Shell, Statoil
  ➢ Suppliers:
    Aker Solutions, Cameron, Dril-Quip, FMC Technologies, GE Oil & Gas, Master Flo Valve, Schlumberger Subsea, Ultra Deep
  ➢ General Interest:
    Genesis, Independent, IntecSea, JP Kenny, Oceaneering Int’l, Tetra Technologies, Universal Pegasus
• 5 Non-Voting Ballot Comment Only
  Contitech Rubber Industrial, DTC Int’l, DUCO, US Gov’t, Wellstream Int’l
SC 17 Standards – Trees & Manifolds

API 17A Subsea Production Systems
API 17B, 17J, 17K, 17L1, 17L2 – Flexible Pipe & Ancillary Equipment
API 17C — TFL Systems

API 17D Subsea Wellheads and Trees
API 17E — Production Umbilicals
API 17F — Production Controls
API 17G — Completion/Workover Risers
API 17H — ROV Interfaces & ROT Intervention Systems
API 17I — Subsea Reliability & Technical Risk Management
API 17O — High Integrity Pressure Protection Systems (HIPPS)

API 17P Templates and Manifolds
API 17Q — Subsea Qualification Forms
API 17R — Flowline Connection Systems
API 17S — Subsea Metering
API 17U — Insulation and Buoyancy
API 17V — Subsea Safety Systems
API 17W — Subsea Capping Stacks
API 2RD — Dynamic Risers for Floating Production
API 17TR4 — Equipment Pressure Ratings
API 17TR5 — Avoidance of Blockages in Production Control Systems
API 17TR6 — Attributes of Prod. Chemicals in Subsea Production Systems
API 17TR7 — Subsea Connector Qualification Procedures
API 17TR8 — HPHT Guidelines
SC 17 Standards – Flowlines & Risers

API 17A — Subsea Production Systems

API 17B 17J, 17K, 17L1, 17L2
Flexible Pipe & Ancillary Equipment

API 17C TFL Systems
API 17D — Subsea Wellheads and Trees
API 17E — Production Umbilicals
API 17F — Production Controls
API 17G — Completion/Workover Risers
API 17H — ROV Interfaces & ROT Intervention Systems
API 17N — Subsea Reliability & Technical Risk Management

API 17O Hi Integrity Pressure Protection Systems (HIPPS)
API 17P — Templates and Manifolds
API 17Q — Subsea Qualification Forms

API 17R Flowline Connection Systems
API 17S — Subsea Metering

API 17U Insulation & Buoyancy
API 17V — Subsea Safety Systems
API 17W — Subsea Capping Stacks

API 2RD Dynamic Risers for Floating Prod
API 17TR4 — Equipment Pressure Ratings
API 17TR5 — Avoidance of Blockages in Production Control Systems
API 17TR6 — Attributes of Prod. Chemicals in Subsea Production Systems
API 17TR7 — Subsea Connector Qualification Procedures
API 17TR8 — HPHT Guidelines
SC 17 Standards – Control Systems

API 17A — Subsea Production Systems
API 17B, 17J, 17K, 17L1, 17L2 – Flexible Pipe & Ancillary Equipment
API 17C — TFL Systems
API 17D — Subsea Wellheads and Trees

**API 17E Production Umbilicals**

**API 17F Production Controls**
- API 17G — Completion/Workover Risers
- API 17H — ROV Interfaces & ROT Intervention Systems
- API 17N — Subsea Reliability & Technical Risk Management
- API 17O — High Integrity Pressure Protection Systems (HIPPS)
- API 17P — Templates and Manifolds
- API 17Q — Subsea Qualification Forms
- API 17R — Flowline Connection Systems

**API 17S Subsea Metering**

**API 17V Subsea Safety Systems**
- API 17U — Insulation & Buoyancy
- API 17W — Subsea Capping Stacks
- API 2RD — Dynamic Risers for Floating Production
- API 17TR4 — Equipment Pressure Ratings
- API 17TR5 — Avoidance of Blockages in Production Control Systems
- API 17TR6 — Attributes of Prod. Chemicals in Subsea Prod. Systems
- API 17TR7 — Subsea Connector Qualification Procedures
- API 17TR8 — HPHT Guidelines
SC 17 Standards – Intervention

API 17A — Subsea Production Systems
API 17B, 17J, 17K, 17L1, 17L2 – Flexible Pipe & Ancillary Equipment
API 17C — TFL Systems
API 17D — Subsea Wellheads and Trees
API 17E — Production Umbilicals
API 17F — Production Controls

**API 17G Completion/Workover Risers**

**API 17H ROV Interfaces & ROT Intervention Systems**

API 17N — Subsea Reliability & Technical Risk Management
API 17O — High Integrity Pressure Protection Systems (HIPPS)
API 17P — Templates and Manifolds
API 17Q — Subsea Qualification Forms
API 17R — Flowl ine Connection Systems
API 17S — Subsea Metering
API 17U — Insulation & Buoyancy
API 17V — Subsea Safety Systems

**API 17W Subsea Capping Stacks**

API 2RD — Dynamic Risers for Floating Production
API 17TR4 — Equipment Pressure Ratings
API 17TR5 — Avoidance of Blockages in Production Control Systems
API 17TR6 — Attributes of Prod. Chemicals in Subsea Prod. Systems
API 17TR7 — Subsea Connector Qualification Procedures
API 17TR8 — HPHT Guidelines
SC 17 Standards – Methods / Specialties

API 17A — Subsea Production Systems
API 17B, 17J, 17K, 17L1, 17L2 – Flexible Pipe & Ancillary Equipment
API 17C — TFL Systems
API 17D — Subsea Wellheads and Trees
API 17E — Production Umbilicals
API 17F — Production Controls
API 17G — Completion/Workover Risers
API 17H — ROV Interfaces & ROT Intervention Systems

API 17N  Subsea Reliability & Technical Risk Management

API 17O — High Integrity Pressure Protection Systems (HIPPS)
API 17P — Templates and Manifolds

API 17Q  Subsea Qualification

API 17R — Flowline Connection Systems
API 17S — Subsea Metering
API 17U — Insulation & Buoyancy
API 17V — Subsea Safety Systems
API 17W — Subsea Capping Stacks
API 2RD — Dynamic Risers for Floating Production

Technical Reports – Topical Issues

API 17TR4 — Equipment Pressure Ratings
API 17TR5 — Avoidance of Blockages in Production Control Systems
API 17TR6 — Attributes of Prod. Chemicals in Subsea Prod. Systems
API 17TR7 — Subsea Connector Qualification Procedures
API 17TR8 — HPHT Guidelines
Standard Development & Mgmt

• Drivers for Revised Subsea Documents
  – Evolution of standardized technologies & practices
  – Broadening of performance envelopes
  – Additions / Modifications to address technical issues
  – Enhancements to analytical methods / reliability
  – Maintained priority for elements of HSSE

• Drivers for New Subsea Documents
  – Maturity of new subsea technologies
  – Recommended practices for enhanced performance
  – Industry technical input as basis for gov’t regs
Current Focus Areas

- 17D Subsea Wellheads & Trees –
  (Clarifications to application of latest rev)

- 17F Subsea Controls –
  (General revision; upgrade key technical elements)

- 17G Completion Workover Systems –
  (Upgrade RP to Spec; work key technical elements)

- 17H ROV Interfaces --
  (Resolve hot stab interface standards)
Current Focus Areas

- 17N Subsea Reliability —
  *(Incorporating integrity management)*

- 17O HIPPs —
  *(Revising Section 9; upgrading treatment of qualification/performance)*

- 17 V Subsea Control Safety System Spec —
  *(API 14C equivalent for subsea facilities)*

- 17W Capping Stacks --
  *(Sister document to API 53 for BOP Stacks)*
Current Focus Areas

- 17TR8 – SC17 specific applications for HPHT in response to PER15K
- TRx – Impacts of External Pressure on Subsea Hydrotesting
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