IOGP JIP33 Standardisation of Equipment Specifications for Procurement – Completion of the Pilot and the Next Phase

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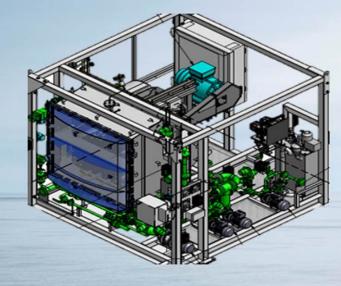




Fresh Water Package

- From customised to industrialised packages (example)

Customised



Industrialised



Minor modifications outside package needed (10-20% of new value)

40% weight reduction, 50% reduction in size, ~90% cost reduction

But same capacity



Project context, objective and vision

Context

Between 2010-2014, 75% of large E&P projects exceeded budget by 50% on average, and 50% of projects exceeded schedule by almost 40%.

Objective

The CPC initiative seeks to drive a structural reduction in upstream project costs with a focus on industry-wide, non-competitive collaboration and standardisation.

Vision

The vision for the industry is to standardise specifications for procurement for equipment and packages, facilitating improved standardisation of major projects across the globe.



IOGP JIP33 Standardisation of equipment specifications for procurement





JIP33 phase 1 participants





Value potential

Preliminary estimates indicate...



• Improved safety.



Potential cost reductions of 10-20% of CAPEX spending on equipment.



Up to 40% schedule compression for standardised asset classes.



Improved equipment quality and reliability hence lower lifecycle costs.

These estimates will be further assessed with vendors and companies during the proof-of-concept consolidation in 1H 2017.



JIP33 phase 1 – proving the concept

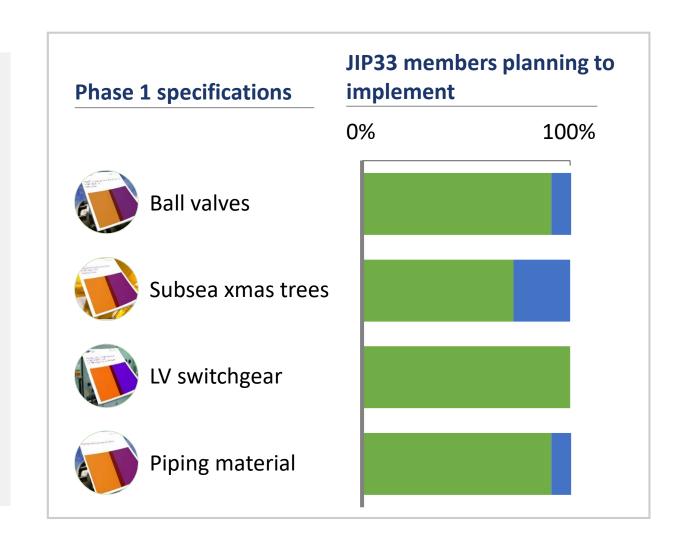
Achievements

Completed **proof-of-concept** by producing 4 standardised specifications for procurement.

Developed guidance document on supporting cultural change.

Documented learnings from proof-of-concept phase.

Established **Engineering Leadership Summit (ELS)** to drive second phase.





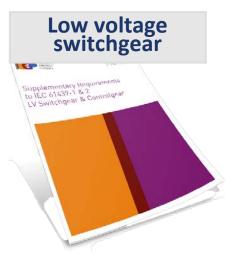
JIP33 phase 1 equipment specifications for procurement



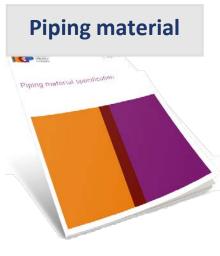
IOGP S-562 is based on API 6D 24th edition Specification for pipeline and piping valves.



IOGP S-561 is based on API Spec 17D subsea wellheads and XT requirements.



IOGP S-560 is based on the IEC 61439 low-voltage switchgear and controlgear assemblies.



IOGP S-563 is based on NORSOK M-630 datasheets.

Specifications have been reviewed by suppliers:









High level feedback on the Capital Project Complexity (chaired by Ben van Beurden, CEO Shell) from CEOs at the WEF meeting in Davos

- Business case is sound and not in question.
- Less focus on 'technical excellence' and more focus on 'risk mitigation' from the subject matter experts in the creation of these specifications –create the 'minimum specification'.
- Standardisation will drive more value than just CAPEX. However, the more we focus on cost the quicker we will get to the right place.
- The engineering leadership summit must steer the way forward to focus the right effort.
- Next steps: Consolidate JIP33 proof-of-concept and increase the scale of the scope and visibility of the effort.



JIP33 phase 2 - way forward



















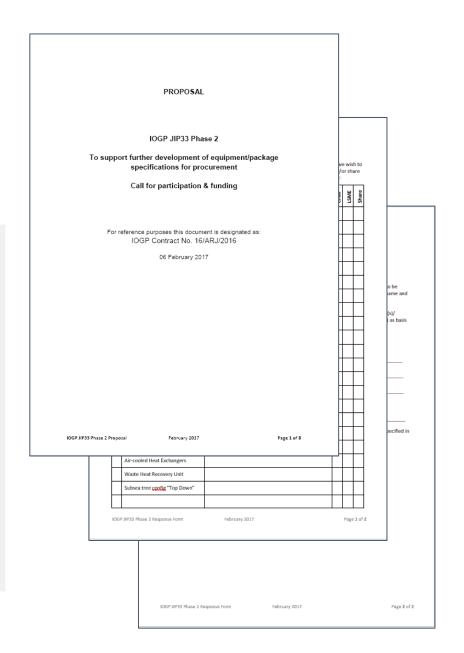




JIP33 phase 2 plan comprises of five workstreams:

- 1. Adopt specifications across the industry.
- 2. Implement standardisation KPIs for individual companies and industry as a whole.
- 3. Improve the ball valve and subsea xmas trees specifications if deemed necessary.
- 4. Embed the culture change and work the communications plan.
- 5. Agree and create further procurement specifications.





Cultural Change

Supporting activities (examples)

Clearly communicate the industry vision and business case for change to foster understanding

- Communicate the value of standardization
- Explain the case for change from an engineering perspective
- Align SMEs with industry priorities

Role model standardization by supporting industry collaboration efforts

- Collaborate with peers across the industry
- Encourage and reward engagement with the supplier market
- Celebrate successes of standardization in your organization

Embed standardized technical specifications for procurement within their organisation through **formal mechanisms**

- Replace company specifications with new standardized specs
- Ensure company policies support use of standardized specs
- Follow "no deviation" policy
- Identify single point of accountability for each spec

Provide the necessary capacity and capability to further drive standardization

- Define a standardization strategy with supporting resources
- Empower SMEs to make decisions on behalf of companies
- Develop timeline for implementation in future projects
- Develop long-term governance model for updates and modifications



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Culture change needed to embed standardization across the oil and gas industry

1. Introduction to industry standardization and specifications

Over the past decade, projects across the oil and gas industry have been plagued by cost and schedule overuns, exacerbating underlying cost escalation. Rising project costs must be addressed to ensure long term viability of the future capital programs. Standardization is widel recognized as part of the solution, and individual companies have been progressing standardization of specifications within their own businesses. However, the standardization journey is only just beginning: the oil and gas industry still tags behind others such as the automotive and aviation, as individual companies each maintain their own amendments on otherwise established industry or international standards.

Our vision for the industry is to unlock significant value and drive a permanent reduction in precious costs through use of industry-level, global technical specifications for procurement of bulk materials, packages, modules and potentially, even projects. This will create a win-winwin outcome for operators, engineering contractors and suppliers through improved cost, schedule, quality, reliability and safety. Previous industry efforts have failed to achieve this vision, in large part due to failure to implement and successfully sustain change in individual operators.

Support from industry leadership will be indispensable to making the first step on this journey a success. The IOGP JIP33 on "standardization of equipment specifications for procurement" was initiated by operators to prove the concept of industry-level standardization IOGP JIP33 has 17 participating operators' and support from the World Economic Forum (WEF). The leam is close to agreeing industry-wide specifications for procurement for three pilot types of equipment – ball valves, subsea Christmas trees and low voltage switchgears – and is proparing to implementation. These specifications have been developed by subject matter expects (SMEs) from the operators with input from suppliers gathered by IOGP, Success of this ploit will now depend on the implementation of these specifications in individual organizations across the industry.

Following the pilot, the program will be scaled up to support the long-term vision of standardizing the majority of technical requirements across the industry.

2. The value of standardized specifications for the oil and gas industry

Standardized specifications will support safety, our number one priority, as well as improve project cost, schedule, quality and reliability.

Safety, Standardization is a core contributor to safety in many industries beyond oil and
disciplination of the safety in the safety of the safety in the safety between projects or operations. Good governance
will allow lessons learned from across the industry to be incorporated in updates to
receive fine the behavior scale from the part of continuous impropriated.



¹ BP, Chevron, Engle, Eni, ExxonMobil, Maersk, OMV, Pemex, PTTEP, Repsol, Saudi Aramco, Shell, Sonangol, Statoll, Total, Wintershall and Woodside