Moving towards global standards for the benefit of the oil and gas industry

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Oil & gas standards history

- Historically, the American organisations like API, ANSI, ASME, ASTM & AWS etc. developed the standards frequently used by the global upstream oil & gas industry.

- North Sea operating companies developed in the 80’s lots of in-house and project specifications to fit their needs not covered by the American standards.

- Growing European Union (EU) interest for developing European upstream standards emerged mid 80’s in view of EU’s “new approach” to writing directives with general safety requirements to be supported by technical standards.

A change in developing oil & gas standards and company specifications was required.
There are 700,000+ standards out there for our industry use. We need to focus.

Private “in-house” owners & users, contractors, suppliers, manufacturers, regulators, academia...
In total 5,180 standards from as many as 131 different organizations are referenced in the technical in-house specifications of seven Operating Companies.
OGP benchmark 2008 on in-house technical specifications and their use in the Operating Companies’ documents.

Are many of these Company specifications due to missing international standards?
Why change – why make global ISO and IEC standards?

• Create common understanding.
• Facilitate global trade / availability of material and equipment.
• Reduce design work, retooling and inventory.
• Accelerate product development and delivery.
• Global competition will reduce cost.
• ISO & IEC offer a global arena for standards work and global experts.
• Fair directives for the work.
Why change – why make global ISO and IEC standards?

- Transfer international experience.
- Maintain best practices and codification of knowledge for improved solutions that ensures HSE compliance.
- Voluntary participation and use of ISO & IEC standards.
- Reduce need for company specifications.
- Can support national regulations and reduce text of national regulatory documents.

Therefore ISO/TC 67 was reactivated 1989 Made for & made by the industry Hence, OGP takes an interest in standards.
OGP supported the ISO initiative in 1987 to reactivate ISO/TC 67 to develop ISO standards for the upstream – the petroleum & natural gas industry.

This created a global arena for standards development, where all ISO members and nations concerned have a role to play.

ANSI, USA were offered and accepted responsibility for the ISO/TC 67 secretariat.


A new era in the global upstream industry standardisation had started.
Standardisation bodies – relationships

International
- ISO / IEC

Regional
- ANSI
- GOST
- TISI
- BSI

National
- ANSI
- GOST
- TISI
- BSI

Associations
- API
- ASTM
- PTIT
- OGP
- EEMUA
- NORSOK

Industry
- CONTRACTORS
- OPERATORS
- SUPPLIERS
- ACADEMIA
- AUTHORITIES

Vienna Agreement

Recognised

OGP
The oil & gas industry is global
ISO/TC 67 is one of the more important global standards committees

TC67 enjoys a global base of member countries with opportunities for everyone to participate
ISO TC67 has published 145 standards.

API has adopted 76 of these as joint API / ISO standards.

CEN has adopted 131 of these as joint European EN ISO standards.

China, Kazakhstan, etc. have also adopted many of the ISO standards.

Gulf countries, Russia are in the process to adopt many of these ISO standards.

Other CIS countries should also adopt/use these ISO standards.
This graph (from an OGP study of twelve offshore regulators around the globe) suggests that there is ample room for increased development and use of International Standards.

www.ogp.org.uk/pubs/426
Over these 15 years, standards work in BSI committees has changed to be mostly international (ISO, IEC, CEN and CENELEC). The percentage of international-based standards increased from 36% in 1990 to 75% in 2005, while the percentage of national-based standards decreased from 64% to 25%.

Source: UK DTI Report The Empirical Economics of Standards, June 2005
In total 5,180 standards from as many as 131 different organizations are referenced in the technical in-house specifications of seven Operating Companies.

110 of these ISO standards are developed by ISO/TC 67.
ISO offers cost reduction

- ISO 15589-2 for cathodic protection is an example to show that prioritising ISO work offers good results.

- ISO standard developed by international consensus process.

- Use of this ISO standard 15589-2 offered 20 Mill $ in cost savings in relation to using local NORSOK standard M-503 for the 1.200 km Ormen Lange pipelines.
Tenaris ISO 11960/API 5CT coupling

One resulting benefit:

OCTG parts and equipment for the oil & gas industry are now growing in availability according to globally relevant ISO standards.

TENARIS ISO 11960 / API 5CT Casing coupling
• Made in Mexico
• By Italian company
• For Middle East buyer
OGP strongly supports the internationalisation of key standards.

OGP’s position on standards is among others:

- Development and use of ISO and IEC standards should be promoted.
- International standards should be used without modification wherever possible, but have flexibility to recognise regional variations.
- Available resources should be used efficiently, avoiding duplication of effort.
- Company specifications should be minimised.

The adoption of this approach is expected to minimise barriers to trade, enable more efficient worldwide operations, and improve the technical integrity of equipment, materials, and offshore structures used by the Petroleum, Petrochemical and Natural Gas Industries.
OGP Membership

North America
- Anadarko
- API
- Baker Hughes
- Chevron
- ConocoPhillips
- Devon Energy
- ExxonMobil
- Halliburton
- Hess
- 27 members active in region

South America
- ARPEL
- Hocol
- CSC
- Petrobras
- 21 members active in region

Europe
- AMI
- BG Group
- BP
- Cairn
- DONG Energy
- Energy Institute
- ENI
- GDF Suez
- IOOC
- IPSECA
- Maersk
- MOL
- NOGEPA
- 35 members active in region

Russia & Caspian region
- TNK-BP
- 17 members active in region

Asia & Australasia
- BHP Billiton
- CNOOC
- Inex
- JOGMEC
- ONGC
- Papuan Oil Search
- Petronas Carigali
- 28 members active in region

Middle East
- ADNOC
- Dolphin Energy
- Kuwait Oil
- Persian LNG
- Petropec
- RasGas
- Saudi Aramco
- SEPO
- Yemen LNG
- 32 members active in region

Standards Workshops

Africa
- Greater Nile Petroleum
- 29 members active in region
EXECUTIVE SUMMARY

A set of international standards for a wide selection of vital oil and gas publications in 2006. A further 16 are planned for publication this year. The

GULF STATE COMPANIES FOCUS ON ISO STANDARDS

Catalogue of international standards used in the petroleum and natural gas industries

To be updated

http://info.ogp.org.uk/standards/

Saudi Aramco (SA) organised its first International Standards forum and workshop on 28-29 November 2006, at the Le Gulf Meridien Hotel, Al-Khobar, Saudi Arabia. This knowledge sharing event was designed to provide the participants with an opportunity to broaden their understanding of the
ISO/TC67 Vision

Global Standards Used Locally Worldwide

..... also for CIS countries!
Conclusion

- Join the ISO/IEC global standards work
- Capture the value added by making use of the new ISO/IEC standards for the oil & gas industry
- www.iso.org / www.iec.ch
Questions?

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