

**Key note presentation to
International Standards Workshop,
Bucharest, Romania 15-16 February 2007**

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



**Alf Reidar Johansen,
Hydro, Norway
Chairman, OGP Standards Committee**



HYDRO

What is OGP?

The International Association of Oil & Gas Producers
formed in 1974.

OGP members include the world's leading private and state-owned oil and gas companies, their national and regional associations and major upstream contractors and suppliers.

Members produce more than half of the world's oil
and about one third of its gas.



Offices in London and Brussels

Base region of Members

North America

Amerada Hess	Halliburton
API	IADC
Anadarko	IAGC
Baker Hughes	Marathon
Chevron	MI-SWACO
ConocoPhillips	Occidental
Devon Energy	Pemex
ExxonMobil	PetroCanada

24 members active in region

Europe

AMI	Hydro
BG Group	OTF
BP	OMV
DONG	Perenco
Denerco	Repsol-YPF
Energy Institute	Schlumberger
ENI	Shell
Hellenic	Statoil
IOOA	Total
IPIECA	Tullow Oil
Mærsk	UKOOA
NOGPA	WEG

31 members active in region

Russia & Caspian region

AgipKCO
TNK-BP

21 members active in region

Asia & Australasia

BHP Billiton	Petronas Carigali
Cairn Energy	Premier Oil
CNOOC	PTT EP
JOGMEC	Woodside
Papuan Oil Search	

24 members active in region

Africa

Greater Nile Petroleum
SONATRACH

29 members active in region

Middle East

ADNOC	RasGas
Dolphin Energy	Saudi Aramco
Kuwait Oil	Yemen LNG
Qatar Petroleum	

27 members active in region

South America

ARPEL	PDVSA
Hocol	Petrobras

22 members active in region

★ Standards Workshops
★ Planned Workshops

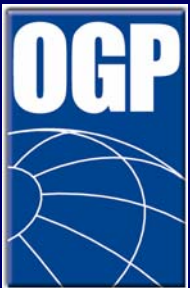


OGP vision

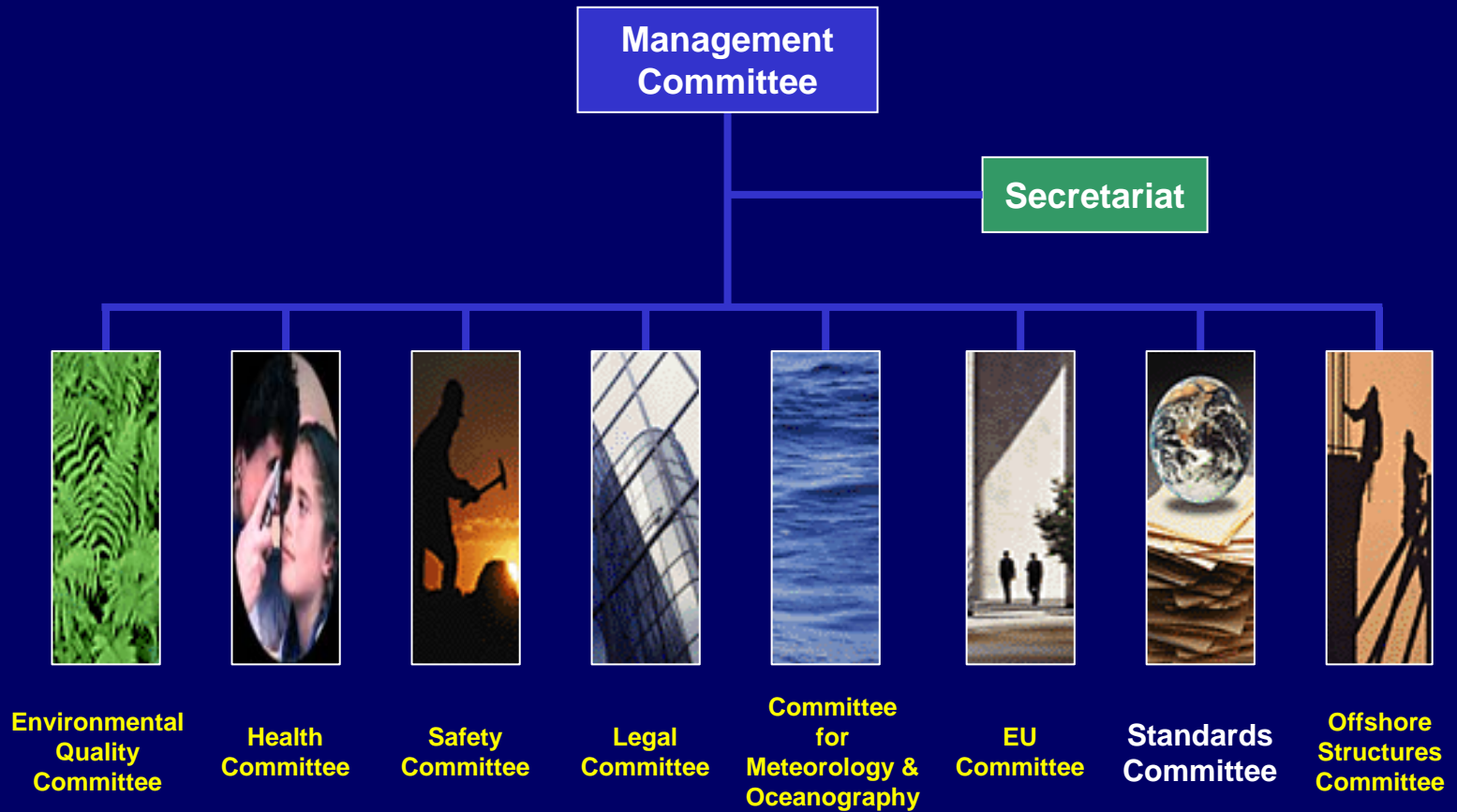
To work on behalf of all the world's upstream companies to promote responsible and profitable operations

OGP mission

- To represent the interests of the upstream industry to international regulatory and legislative bodies
- To achieve continuous improvement in safety, health and environmental performance and in the engineering and operation of upstream ventures
- To promote awareness of Corporate Social Responsibility within the industry and among stakeholders



OGP Organisation



New committee added for Surveying & Positioning

Global experience

- OGP has access to a wealth of technical knowledge and experience with its members operating around the world in many different terrains.
- OGP collate and distil this valuable knowledge into a range of reports and guidelines. Some for general use while others are restricted to OGP members.



Documents at www.ogp.org.uk

OGP Standard Committee membership

Representative ¹⁾	Company	Country	Other functions
Wilson Barbosa de Oliveira	Petrobras	Brazil	
Anatoly Baryshnikov	Eni	Italy	CEN/TC12 AH8 chair
Gail Baxter	Marathon	USA	
Alf Reidar Johansen (Chair)	Hydro	Norway	
Greg Lever	Petro-Canada	Canada	
Alain Loppinet	CEN	France	CEN/TC12 Chair
Martin Maeso	Energy Institute	UK	
David Miller	API	USA	API Std. Progr. dir.
Saif S Al Naimi ⁴⁾	Qatar Petroleum	Qatar	
Nabil Nuaim ⁵⁾	Saudi Aramco	Saudi Arabia	
Terry Qin ²⁾	CPSC	China	
Neil Reeve	Shell	Netherlands	IFAN President
Daniel Rioche	Total	France	
Alain Samne	ISO	Switzerland	Technical group mgr.
Cheryl Stark	BP	USA	ISO/TC67 Chair
Mike Swidzinski	ConocoPhillips	UK	
Kjell Øyvind Tendenes	Statoil/OLF	Norway	
Richard Torgersen ³⁾	ExxonMobil	USA	
Ramon Torra	Repsol	Spain	

Notes: ¹⁾ Plus corresponding members from: BG, Chevron, Marathon, Mærsk and Premier. Alternates: ²⁾ Xiaohong Chen & Du Delin, CPSC ³⁾ Nikolaus Gromes, EMI, Germany ⁴⁾ Muayyad Ajjawi ⁵⁾ Bader Busbait



Oil & gas standards history

- Historically, the American organisations API, ANSI, ASME, ASTM & AWS etc. developed the standards frequently used by the upstream world wide oil & gas industry.
- North Sea operating companies developed lots of in-house and project specifications to fit their needs not covered by the American standards.
- Growing EU interest for developing European upstream standards emerged in view of EU's "new approach" for technical standards to support the general safety requirements in the directives.

– **A change in developing oil & gas standards & specifications was required**



ISO initiative & OGP support

- OGP supported the ISO initiative in 1987 to reactivate ISO / TC67 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 / TC67 secretariat.
- First meeting of ISO / TC67 in Paris 1989.
- A new era in the global upstream industry standardisation had started.



Why make global ISO and IEC standards?

- Create common understanding.
- Facilitate global trade / availability of 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 networking possibilities.
- Fair directives for the work.



Why make global ISO and IEC standards?

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

TC67 made for & made by the upstream industry

Therefore OGP takes an interest in standards





**International
Association
of Oil & Gas
Producers**

International Standards Bulletin

EXECUTIVE SUMMARY

A set of International Standards for a wide selection of vital oil and gas industry materials, equipment and offshore structures is emerging from the International Standards Organization, ISO. These standards are primarily the responsibility of ISO Technical Committee 67 (ISO TC67). They are developed using a consensus process that includes more than a thousand oil and gas industry experts from around the globe and an international review and approval process.

116 ISO standards have now been issued, including 13 revisions or new publications in 2005. A further 16 are planned for publication this year. The international oil and gas industry and national standardization

organizations support these standards for worldwide application. North and South American, Chinese, European and other standards bodies are now adopting them for regional and national use. For industry, they will reduce costs and delivery time, and facilitate trade across national borders. For regulators, they offer support for goal-setting and functional regulations, while achieving higher levels of safety through better design.

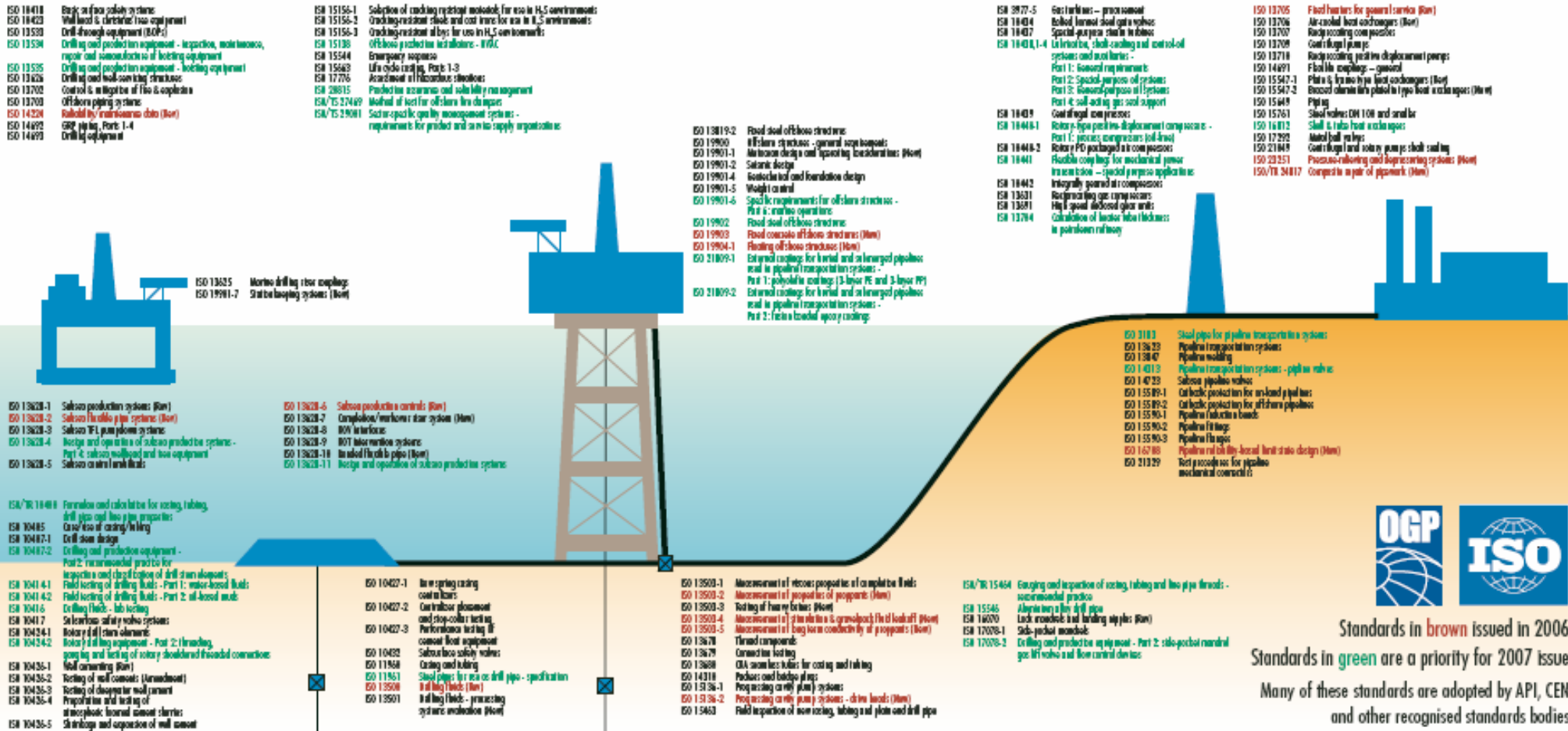
These standards are now being implemented widely in oil and gas provinces around the world, replacing existing industry, regional and national standards and eliminating or reducing the need for company-specific specifications.



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

For details on standards available from ISO TC67, see the wall-chart inside.

ISO Standards for use in the oil & gas industry



Standards in **brown** issued in 2006
 Standards in **green** are a priority for 2007 issue
 Many of these standards are adopted by API, CEN and other recognised standards bodies



- ISO TC67 has published 142 standards.
- API has adopted 50 of these as joint API / ISO standards.
- CEN has adopted 100 of these as joint European EN ISO standards.
- EU & CEN members are obliged to adopt these EN ISOs as national standards.



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

**Report No. 362
January 2005**



**Now available on OGP website
www.ogp.org.uk**

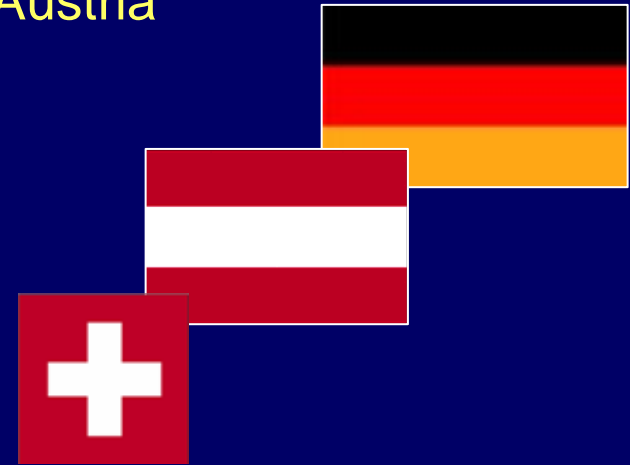
ISO offers new technology

- Hydro used ISO 13628-series for subsea production installations for the development of the Ormen Lange field (illustration below).
- These ISO standards are developed on the basis of API, NORSOK and other new input.
- API have or plans to back-adopt all of the ISO subsea standards.



German DIN survey: Economic benefits of standardization

- Survey of 707 companies in Germany, Austria and Switzerland.
- Strategic benefits of standardization.
- Simplify contractual arrangements.
- Cost reduction.
- Lower accident rates.
- Reducing liability risks.
- Positive influence on innovation.
- Result of macroeconomic analysis show the economic benefit of standardization to be approx. 1% of the gross national product.



COST/BENEFITS FROM ISO STANDARDS

ISO/TC 67 has delivered in the last 5 years over 100 new ISO standards for materials and equipment covering all the main elements of an integrated oil and gas development: from the sub-surface safety valve, through the casing and wellhead, to the surface facilities, including pumps, compressors, and processing equipment for refineries, and petrochemical plants.

These standards

- carry a cost
- enhance safety for people
- transfer technology

These standards, in the ISO, at least US\$ covered by haul; saving

a global industry trading in international markets - and with international contractors, suppliers and customers, operating in a multitude of different regulatory frameworks - the oil and gas industry deserves International Standards that are relevant to a global market.

Small savings on each piece make big returns to standards developers

Cost/benefit

Total worldwide industry expenditure covered by the 30 key ISO/TC 67 standards = US\$25 billion p.a.

If only 1% is saved by the use of the ISO standards, then:

Benefit = US\$250 million p.a.

Investment to achieve this is:

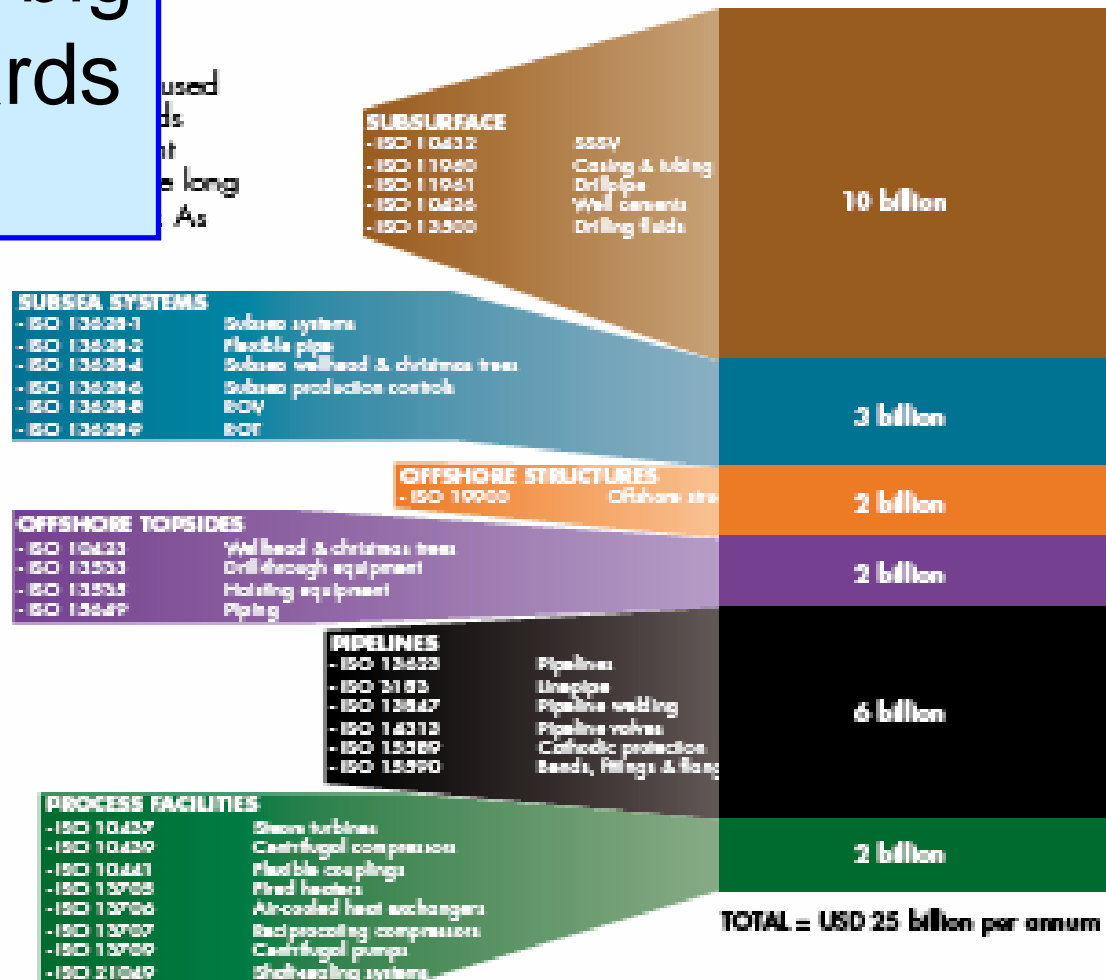
Cost = US\$10 million p.a.

Hence, as Return = Benefit/Cost:

Return = 250/10 = 25:1

Capture the value added
Make use of well over 120 new ISO standards for your own benefit!

30 KEY ITEMS FOR ISO/TC67

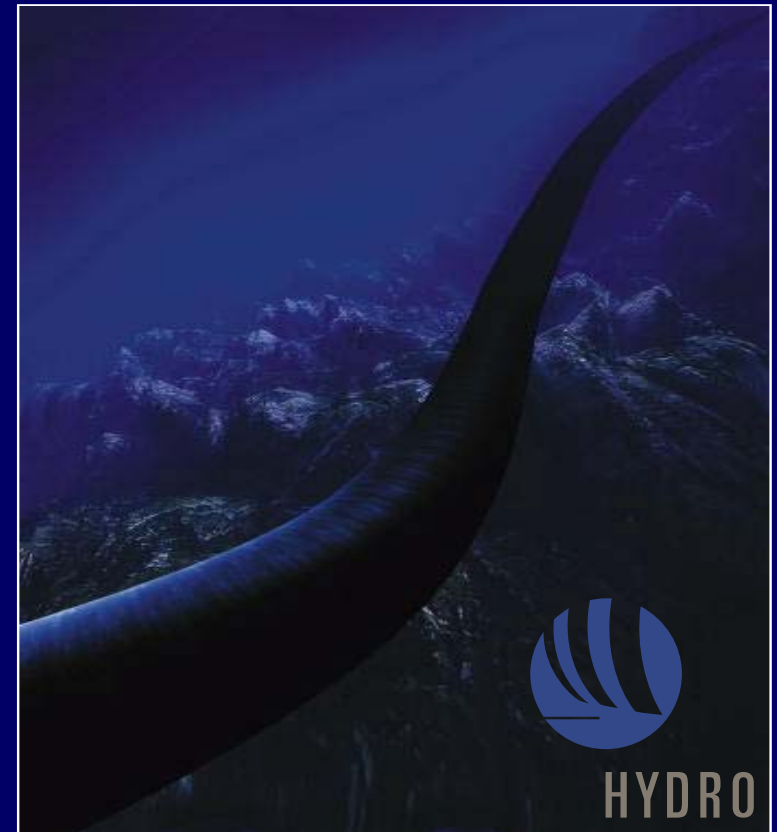


OGP

will hold a session on international standards in conjunction with the International Pipeline Conference to be held in Calgary, Alberta 25 September 2006. The session is being hosted by the ASME and the Canadian Energy Pipeline Association. Invitation is open to all sectors of the oil and gas industry.

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 offers 20 Mill \$ in cost savings in relation to using local NORSOK standard M-503 for Hydro's Ormen Lange pipelines.



OGP position on standards

The OGP has been a catalyst for change in industry 's approach to standards and strongly supports the internationalisation of key standards used by the Petroleum and Natural Gas Industries. OGP 's position on standards is:

- development and use of ISO and IEC standards should be promoted
- development of standards should be based on a consensus of need
- “users” should be represented on standards work groups
- duplication of effort should be avoided
- standards should be simple and fit for purpose
- International standards should be used without modification wherever possible
- company specifications should be minimised and written, where possible, as functional requirements.



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 and Natural Gas Industries.

Key note:

Join the EN/ISO/IEC global standards
work

&

Capture the value added by **making
use of** the new EN/ISO/IEC standards
for the oil & gas industry

www.iso.org / www.iec.ch





Global
Standards
Used Locally
Worldwide

