

# International Standards Workshop for the Oil & Gas Industry in Libya & North Africa

20-21 November 2007  
El Mahary Hotel Conference Centre,  
Tripoli, Libya



**Global Standards  
used locally  
worldwide**



# Background

The Libyan National Centre for Standardization & Metrology (LNCSM) and Libyan Petroleum Institute (LPI), in association with the International Organization for Standardization (ISO) and the International Association of Oil & Gas Producers (OGP) are organising a sector-specific workshop for professionals working in the Libyan and North African oil and gas industry that make use of standards in their work.

## Objectives

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This workshop is designed to provide professionals of oil & gas companies, national authorities, service providers, the supply industry and rule-making authorities with the opportunity to broaden their understanding of international standardization activities for this global industry.

The workshop will review and discuss ongoing international, regional and national standardization efforts, the role of standards developing organizations in the standards development process and the experiences within relevant countries and regions of adopting and implementing International Standards for the oil & gas sector, including the challenges facing the harmonisation of company and regional standards with these standards.

## Key Benefits

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- 1) Gain an overview of the International Standardization process with particular focus on the efforts, work and deliverables arising out of ISO Technical Committee (ISO/TC) N° 67, *Materials, equipment and offshore structures for the petroleum, petrochemical and natural gas industries*;
- 2) Improve understanding of the importance and benefits of International Standardization in oil & gas industry and explore the activities and experiences of international, regional, national and company related activities, as well as how Libya and other North African countries can positively influence, via active participation, the development of these standards;
- 3) Participate in the discussion and definition of the Libyan and other North African countries oil & gas sector standardization needs in view of an ongoing global oil & gas industry;
- 4) Develop a clear picture on the benefits of adopting and implementing International Standards as national standards, and elaborating effective solutions to the identified difficulties faced in this regard;
- 5) Learn more on the detailed policies and procedures of the development of ISO standards.

# Programme day 1 (Tuesday 20<sup>th</sup> Nov.)

<b>08:20</b>	Registration & reception	
<b>09:20</b>	Introductory & welcome remarks	<i>Khaled Kredden, LPI</i>
<b>09:25</b>	Opening addresses: <ul style="list-style-type: none"><li>• Secretariat of Planning</li><li>• Secretariat of Electricity, Gas &amp; Water</li><li>• National Oil Corporation</li><li>• ISO Secretary General</li></ul>	<i>Taher Jehaimi Omrans Aboukrah Shoukri Ganhem Alan Bryden, ISO/CS</i>
<b>10:00</b>	Moving towards global standards for the benefit of the oil & gas industry - the global role of OGP	<i>Alf Reidar Johansen, StatoilHydro</i>
<b>10:30</b>	Introduction to the ISO global village	<i>Alain Samne, ISO/CS</i>
<b>11:00</b>	Beverage break	
<b>11:30</b>	Role of the Libyan Petroleum Institute (LPI)	<i>Bourima Belgasm, LPI</i>
<b>11:45</b>	Role of the Libyan National Centre for Standardization & Metrology (LNCSM)	<i>Dia Abouhadra, LNCSM</i>
<b>12:00</b>	Standardization efforts and developments in Libya's NOC	
<b>12:20</b>	OPEC overview of the global oil & gas industry, and the role of international standards	
<b>12:40</b>	Session 1 Q&A	
<b>13:10</b>	Lunch & prayer	
<b>14:40</b>	Work of ISO Technical Committees: <ul style="list-style-type: none"><li>• TC67, Materials, equipment &amp; offshore structures for the petroleum &amp; petrochemical industries</li><li>• TC28, Petroleum products &amp; lubricants</li><li>• TC193, Natural gas</li></ul>	<i>Gilles Trican, Total</i>
<b>15:15</b>	Co-ordination and impacts of the reference system relationship with respect to both petroleum legislation & petroleum operations	<i>Torsten Helbig, Wintershall</i>
<b>15:30</b>	Regional standards organizations and their role in the oil & gas industry <ul style="list-style-type: none"><li>• Gulf Standards Organization (GSO) involvement in regional oil &amp; gas industry</li><li>• Neighbouring countries: Egypt (via EOS &amp; national ministry)</li><li>• ISO, CEN &amp; API co-operation</li></ul>	<i>Adnan Atwa, GSO Mahmoud Eisa, EOS Alain Loppinet, CEN</i>
<b>16:15</b>	Session 2 Q&A	
<b>16:45</b>	Beverage break	
<b>17:15</b>	Think standards, think global - corporate adoption of International Standards in Shell	<i>Neil Reeve, Shell</i>
<b>17:45</b>	Petrobras experience in working with International Standards <ul style="list-style-type: none"><li>• Their impact on national regulations &amp; standards, and on in-house corporate specifications</li></ul>	<i>Arlindo Charbel, ONIP</i>
<b>18:00</b>	Qatar Petroleum <ul style="list-style-type: none"><li>• Experience gained, advantages &amp; challenges - report since joining and participating to the OGP/SC and ISO committee environment</li></ul>	<i>Saif Saed Al-Naimi, Qatar Petroleum</i>
<b>18:30</b>	Role, work, challenges & benefits of LNCSM for the oil & gas, and related sectors <ul style="list-style-type: none"><li>• National committee for International Standards review &amp; adoption</li><li>• Implementation of ISO and IEC International Standards</li></ul>	<i>Dia Abouhadra, LNCSM</i>
<b>19:00</b>	Session 3 Q&A	
<b>19:30</b>	Day 1 summary & key messages	<i>Dia Abouhadra, LNCSM Khaled Kredden, LPI</i>
<b>20:00</b>	Networking Reception	

# ISO Standards for use in the oil & gas industry

ISO 10418 Basic surface safety systems  
 ISO 10423 Wellhead & christmas tree equipment  
 ISO 13533 Drill-through equipment (BOPs)  
 ISO 13534 Hoisting equipment - care/maint  
 ISO 13535 Hoisting equipment - specification  
 ISO 13626 Drilling and well-servicing structures  
 ISO 13702 Control & mitigation of fire & explosion  
 ISO 13703 Offshore piping systems  
 ISO 14224 Reliability/maintenance data (Rev)  
 ISO 14692 GRP piping, Parts 1-4  
 ISO 14693 Drilling equipment

ISO 15156-1 Selection of cracking resistant materials for use in H<sub>2</sub>S environments  
 ISO 15156-2 Cracking-resistant steels and cast irons for use in H<sub>2</sub>S environments  
 ISO 15156-3 Cracking-resistant alloys for use in H<sub>2</sub>S environments  
 ISO 15138 HVAC (Rev)  
 ISO 15544 Emergency response  
 ISO 15663 Life cycle costing, Parts 1-3  
 ISO 17776 Assessment of hazardous situations  
 ISO/TS 27469 Method of test for offshore fire dampers (New)  
 ISO/TS 29001 Sector-specific quality management systems (Rev)

ISO 3977-5 Gas turbines – procurement  
 ISO 10434 Bolted bonnet steel gate valves  
 ISO 10437 Special-purpose steam turbines  
 ISO 10438 Lubrication, shaft-sealing and control-oil systems, Parts 1-4 (Rev)  
 ISO 10439 Centrifugal compressors  
 ISO 10440-1 Rotary-type positive-displacement process compressors (oil-free) (Rev)  
 ISO 10440-2 Rotary PD packaged air compressors  
 ISO 10441 Flexible couplings – special (Rev)  
 ISO 10442 Integrally geared air compressors  
 ISO 13631 Reciprocating gas compressors  
 ISO 13691 High speed enclosed gear units  
 ISO 13704 Calculation of heater tube thickness (Rev)

ISO 13705 Fired heaters for general service (Rev)  
 ISO 13706 Air-cooled heat exchangers  
 ISO 13707 Reciprocating compressors  
 ISO 13709 Centrifugal pumps  
 ISO 13710 Reciprocating positive displacement pumps  
 ISO 14691 Flexible couplings – general  
 ISO 15547-1 Plate & frame type heat exchangers  
 ISO 15547-2 Brazed aluminium platefin type heat exchangers  
 ISO 15649 Piping  
 ISO 15761 Steel valves DN 100 and smaller  
 ISO 16812 Shell & tube heat exchangers (Rev)  
 ISO 17292 Metal ball valves  
 ISO 21049 Centrifugal and rotary pumps shaft sealing  
 ISO 23251 Pressure-relieving and depressuring systems (New)  
 ISO/TS 24817 Composite repair of pipework (New)

ISO 19900 Offshore structures - general requirements  
 ISO 19901-1 Metocean design and operating considerations  
 ISO 19901-2 Seismic design  
 ISO 19901-4 Geotechnical and foundation design  
 ISO 19901-5 Weight control  
 ISO 19902 Fixed steel offshore structures (Rev of ISO 13819-2)  
 ISO 19903 Fixed concrete offshore structures (New)  
 ISO 19904-1 Floating offshore structures (New)

ISO 13625 Marine drilling riser couplings  
 ISO 19901-7 Stationkeeping systems

ISO 13628-1 Subsea production systems  
 ISO 13628-2 Subsea flexible pipe systems (Rev)  
 ISO 13628-3 Subsea TFL pumpdown systems  
 ISO 13628-4 Subsea wellhead and tree equipment  
 ISO 13628-5 Subsea control umbilicals

ISO 13628-6 Subsea production controls (Rev)  
 ISO 13628-7 Completion/workover riser system  
 ISO 13628-8 ROV interfaces  
 ISO 13628-9 ROT intervention systems  
 ISO 13628-10 Bonded flexible pipe  
 ISO 13628-11 Flexible pipe systems for subsea and marine applications (New)

ISO 3183 Steel pipe for pipeline transportation systems (Rev)  
 ISO 13623 Pipeline transportation systems  
 ISO 13847 Pipeline welding  
 ISO 14313 Pipeline valves (Rev)  
 ISO 14723 Subsea pipeline valves  
 ISO 15589-1 Cathodic protection for on-land pipelines  
 ISO 15589-2 Cathodic protection for offshore pipelines  
 ISO 15590-1 Pipeline induction bends  
 ISO 15590-2 Pipeline fittings  
 ISO 15590-3 Pipeline flanges  
 ISO 16708 Pipeline reliability-based limit state design (New)  
 ISO 21329 Test procedures for pipeline mechanical connectors  
 ISO 21809-2 Fusion-bonded epoxy coatings (New)

ISO/TR 10400 Calculations for OCTG performance properties (Rev)  
 ISO 10405 Care/use of casing/tubing  
 ISO 10407-1 Drill stem design  
 ISO 10407-2 Inspection and classification of drill stem elements (New)  
 ISO 10414-1 Field testing of water-based fluids (Rev)  
 ISO 10414-2 Field testing of oil-based fluids (Rev)  
 ISO 10416 Drilling fluids - lab testing (Rev)  
 ISO 10417 Subsurface safety valve systems  
 ISO 10424-1 Rotary drill stem elements  
 ISO 10424-2 Threading and gauging of connections (New)  
 ISO 10426-1 Well cementing  
 ISO 10426-2 Testing of well cements

ISO 10426-3 Testing of deepwater well cement  
 ISO 10426-4 Preparation and testing of atmospheric foamed cement slurries  
 ISO 10426-5 Shrinkage and expansion of well cement  
 ISO 10427-1 Bow spring casing centralizers  
 ISO 10427-2 Centralizer placement and stop-collar testing  
 ISO 10427-3 Performance testing of cement float equipment  
 ISO 10432 Subsurface safety valves  
 ISO 11960 Casing and tubing  
 ISO 11961 Drill pipe  
 ISO 13500 Drilling fluids (Rev)  
 ISO 13501 Drilling fluids - processing systems evaluation

ISO 13503-1 Measurement of viscous properties of completion fluids  
 ISO 13503-2 Measurement of properties of proppants (New)  
 ISO 13503-3 Testing of heavy brines  
 ISO 13503-4 Measurement of stimulation & gravelpack fluid leakoff (New)  
 ISO 13503-5 Measurement of long term conductivity of proppants (New)  
 ISO 13678 Thread compounds  
 ISO 13679 Connection testing  
 ISO 13680 CRA seamless tubes for casing and tubing  
 ISO 14310 Packers and bridge plugs  
 ISO 15136-1 Progressing cavity pump systems  
 ISO 15136-2 Progressing cavity pump systems - drive heads (New)  
 ISO 15463 Field inspection of new casing, tubing and plain end drill pipe

ISO/TR 15464 Gauging and inspection of casing, tubing and line pipe threads (New)  
 ISO 15546 Aluminium alloy drill pipe (Rev)  
 ISO 16070 Lock mandrels and landing nipples  
 ISO 17078-1 Side-pocket mandrels  
 ISO 17078-2 Flow control devices for side-pocket mandrels (New)



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

## ABOUT OGP

The International Association of Oil & Gas producers (OGP) encompasses most of the world's leading publicly traded, private and state-owned oil & gas companies, oil & gas associations and major upstream service companies. OGP members operate in more than 80 different countries and produce more than half the world's oil and about one third of its gas.

The association was formed in 1974 to develop effective communications between the upstream industry and an increasingly complex network of international regulators.

An essential part of OGP's mission is to represent the interests of the upstream industry to international regulators and legislators.

OGP also helps members achieve continuous improvement in safety, health and environmental performance, and in the engineering and operation of upstream ventures. OGP's extensive international membership brings with it a wealth of know-how, data and

experience. OGP committees and task forces manage the exchange and dissemination of this knowledge. OGP additionally promotes awareness of Corporate Responsibility issues such as transparency of revenues and combatting corruption.

The OGP Standards Committee monitors, co-ordinates and influences the development of international standards to meet the needs of OGP members. There is close communication with national, regional and international standards bodies, particularly the API, CEN and ISO. Information on the activities of the OGP Standards Committee and other OGP committees, including freely downloadable publications produced by the OGP, can be accessed via the OGP website at [www.ogp.org.uk](http://www.ogp.org.uk)

## ABOUT ISO

ISO is a network of the national standards institutes of 157 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system.

ISO is a non-governmental organization: its members are not, as is the case in the United Nations system, delegations of national governments. Nevertheless, ISO occupies a special position between the public and private sectors. This is because, on the one hand, many of its member institutes are part of the governmental structure of their countries, or are mandated by their government. On the other hand, other members have their roots uniquely in the private sector, having been set up by national partnerships of industry associations.

Therefore, ISO is able to act as a bridging organization in which a consensus can be reached on solutions that meet both the requirements of business and the broader needs of society, such as the needs of stakeholder groups like consumers and users.

Because "International Organization for Standardization" would have different acronyms in different languages ("IOS" in English, "OIN" in French for Organisation internationale de normalisation), its founders decided to give it also a short, all-purpose name. They chose "ISO", derived from the Greek isos, meaning "equal". Whatever the country, whatever the language, the short form of the organization's name is

always ISO.

**Standards make an enormous and positive contribution to most aspects of our lives.**

Standards ensure desirable characteristics of products and services such as quality, environmental friendliness, safety, reliability, efficiency and interchangeability - and at an economical cost.

When products and services meet our expectations, we tend to take this for granted and be unaware of the role of standards. However, when standards are absent, we soon notice. We soon care when products turn out to be of poor quality, do not fit, are incompatible with equipment that we already have, are unreliable or dangerous.

When products, systems, machinery and devices work well and safely, it is often because they meet standards. And the organization responsible for many thousands of the standards which benefit the world is ISO.

**When standards are absent, we soon notice.**

# Programme day 2 (Wednesday 21<sup>st</sup> Nov.)

08:20	Registration & reception	
09:00	Libyan NOC exposé <ul style="list-style-type: none"><li>• Libyan Accreditation Committee</li><li>• Management &amp; administration of design and engineering technical standards/specifications</li><li>• Role of integrated management systems standards, Ras Lanouf Company</li><li>• Vision, strategies and future outlook, AKAKUS</li></ul>	Mohamed El Asswad Muftah Shambour, LPI  Ayaad Farag Zenad, RASOC Omar El-Mansuri, AKAKUS  Dia Abouhadra, LNCSM
10:00	Future standards needs in Libya	
10:30	<b>Interactive Round-table</b> The round-table discussion will be arranged in mixed groups of 10-15 participants. For the first hour each group will develop answers and positions to one specific question assigned from the five questions below. Following the beverage break the plenary will reconvene and ten randomly picked groups will be asked to present their findings and response. Questions: <ol style="list-style-type: none"><li>1. What are the pros (benefits), con (challenges) for the Libyan oil &amp; gas industry - national and foreign operators, regulators, manufacturers, service providers - moving towards adopting, implementing, referencing International Standards?</li><li>2. What should be done/needs to happen to enable improvements in the Libyan participation in the development of International standards for the O&amp;G industry?</li><li>3. What are the challenges the Libyan O&amp;G industry faces with respect to a better implementation of International Standards related to the O&amp;G industry?</li><li>4. Measures to be taken by the Libyan O&amp;G industry to bring better improvements in the use of International Standards?</li><li>5. Are you aware of apparent or expressed resistance to attempts and efforts to align the Libyan NOC technical specifications with those available from ISO? If yes, why?</li></ol>	<b>Facilitators:</b> Alf Reidar Johansen, StatoilHydro Dia Abouhadra, LNCSM Alain Samne, ISO/CS
11:30	Beverage break	
12:00	Moderated panel-audience discussion <i>Note: all group responses will be collected for further synthesis</i>	<b>Moderators:</b> Alf Reidar Johansen, StatoilHydro Dia Abouhadra, LNCSM Neil Reeve, Shell Khaled Kredden, LPI
13:00	End of the Oil & Gas Standards Development Workshop Summary, key messages & closing ceremony	Khaled Kredden, LPI
13:30	Lunch and prayer	
<b>ISO committee-management &amp; standards-development awareness session</b>		
15:00	Part 1 - ISO introduction, strategy, development, adoption	Alain Samne, ISO/CS
16:30	Beverage break	
17:00	Part 2 - Trends, case study, e-tools, ISO Online, tips & tools	Alain Samne, ISO/CS Gilles Trican, Total

*Note: All presentations will be available on the OGP website,  
<http://info.ogp.org.uk/standards> shortly after the workshop.*



This workshop has been made possible by the participation of the following organizations:



International  
Association  
of Oil & Gas  
Producers



StatoilHydro



TOTAL