



ISO TC67

Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries

**International Standards Workshop,
Bangkok, Thailand
11 March 2010**

Neil Reeve, ISO/TC67 Chair

March 2010, Bangkok

Purpose

This presentation sets out to explain the following, for ISO/TC67:

- Mission, vision, goals
- Scope, structure, recent changes
- Composition
- History
- Present working program
- Task Force on Normative References
- ISO/API/CEN collaboration – Co-branded standards
- Way forward

ISO/TC 67 Vision





ISO/TC 67 statements

Mission:

To create value-added standards for the oil and natural gas industry

Vision:

Global standards used locally worldwide

Goals:

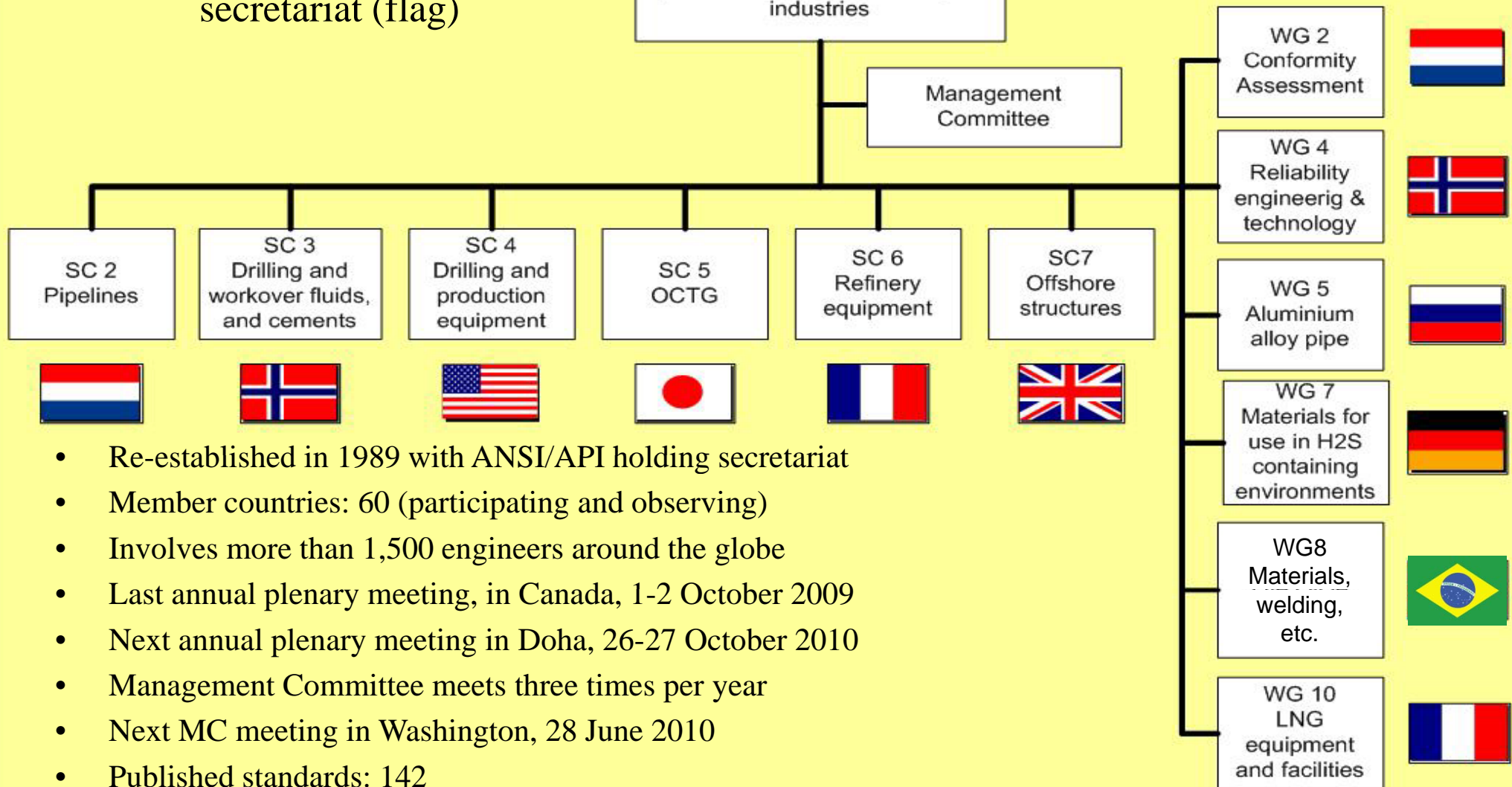
- Prepare standards required by this industry
- Prepare standards that could be adopted worldwide by bodies such as API and CEN
- Publish standards that enable companies to minimize their specifications
- Deliver standards to the target dates on the agreed work programme

ISO TC67 organisation and secretariat (flag)

TC67
Materials, equipment and offshore
structures for petroleum,
petrochemical and natural gas
industries



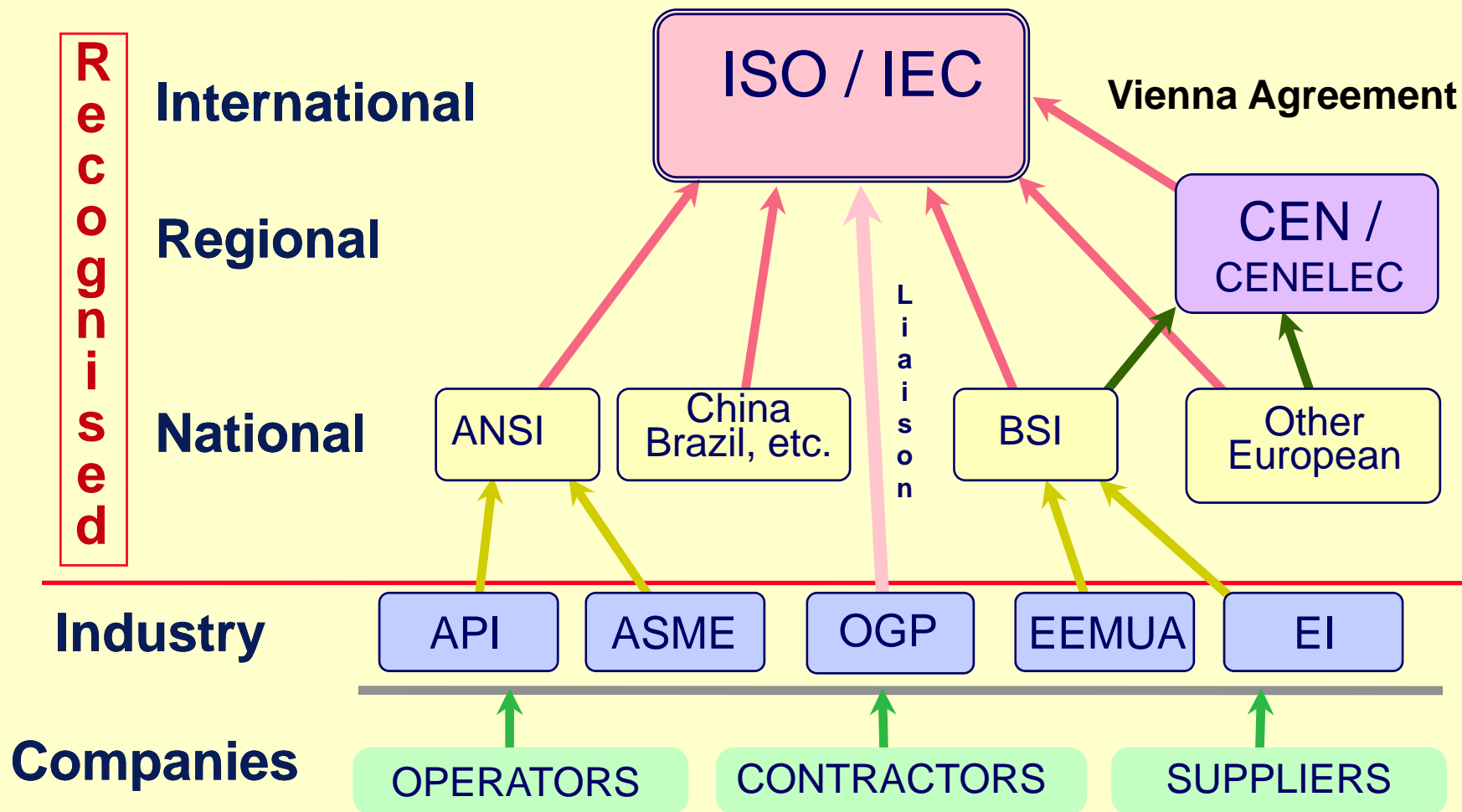
Handover to NEN
in Oct 09



- Re-established in 1989 with ANSI/API holding secretariat
- Member countries: 60 (participating and observing)
- Involves more than 1,500 engineers around the globe
- Last annual plenary meeting, in Canada, 1-2 October 2009
- Next annual plenary meeting in Doha, 26-27 October 2010
- Management Committee meets three times per year
- Next MC meeting in Washington, 28 June 2010
- Published standards: 142
- Current work programme: 71 standards (new + revisions)



Standardization Bodies - Relationships



Recent change in ISO/TC67 Secretariat

- ANSI/API (USA) have relinquished the Secretariat of ISO/TC67 after 20 years service
- ISO have allocated this Secretariat to NEN (the Netherlands) – July 2009
- Effective from October 2009:
 - Neil Reeve – Chair (Shell)
 - Harold Pauwels – Secretary (NEN)

Recent changes in ISO/TC67

- New Work Group 8 on Materials (Brazil)
- New Work Group 10 on LNG (France)
- Upcoming change in Subcommittee 2 Secretariat
- Steadily increasing membership (new: Bahrain, Belgium, Iran, Kazakhstan and Sweden)
- Steadily increasing participation (Brazil, China, Russian Federation)
- Accelerating national adoption
- More than half the portfolio has been revised at least once or is in revision



Members of ISO/TC 67

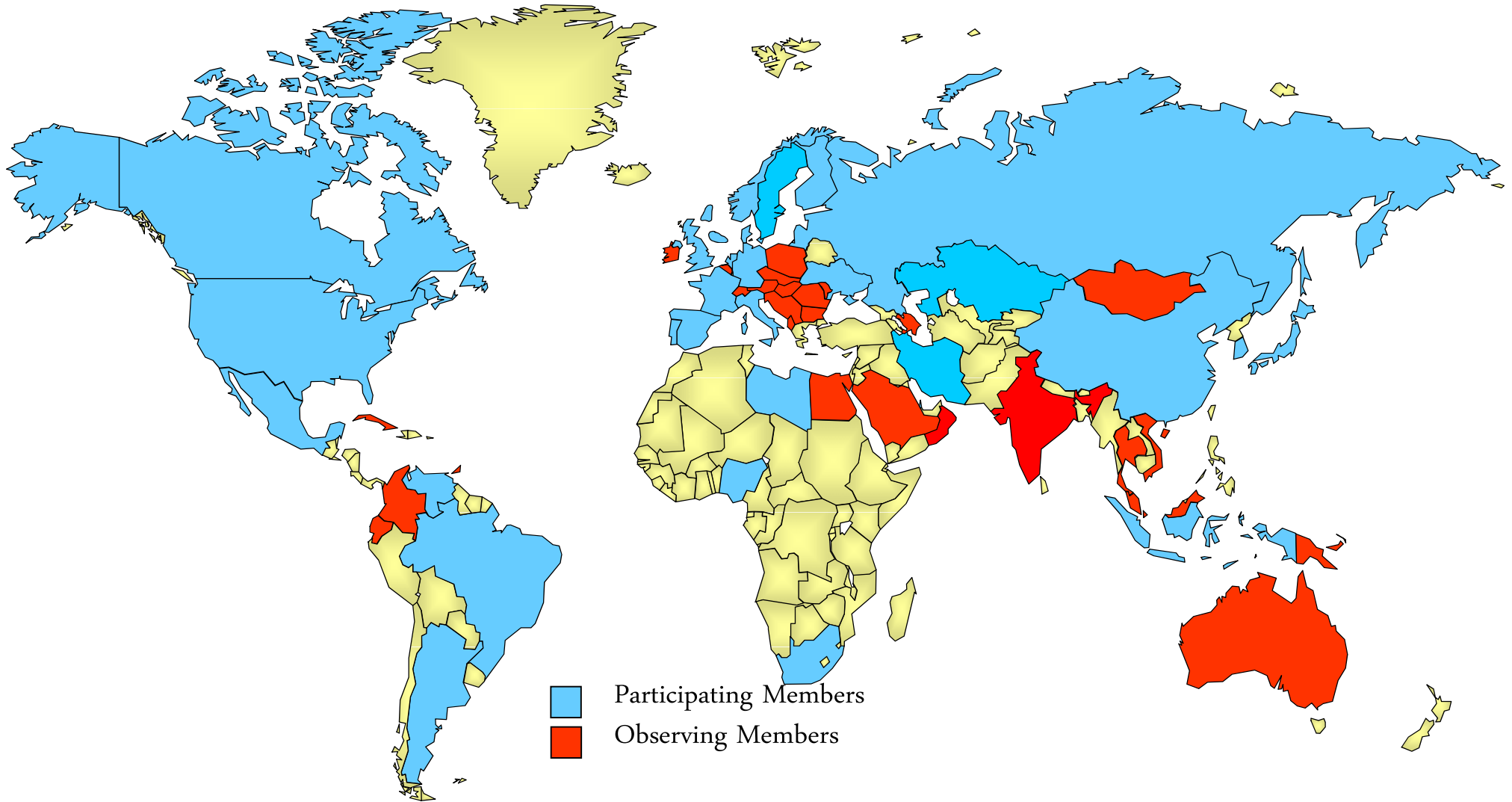
30 Participating (P) Members:

Argentina, Bahrain, Belgium, Brazil, Canada, China, Denmark, Finland, France, Germany, Indonesia, Iran, Italy, Japan, Kazakhstan, Korea, Libya, Mexico, Netherlands, Norway, Portugal, Qatar, Romania, Russian Federation, South Africa, Spain, Sweden, Ukraine, United Kingdom, USA

30 Observer (O) Members:

Australia, Austria, Azerbaijan, Bulgaria, Colombia, Croatia, Cuba, Czech Republic, Ecuador, Egypt, Hong Kong, Hungary, India, Ireland, Malaysia, Moldova, Mongolia, Nigeria, Oman, Poland, Saudi Arabia, Serbia, Singapore, Slovakia, Switzerland, Thailand, Trinidad and Tobago, Turkey, Venezuela, Viet Nam

TC67 COUNTRY MEMBERS



March 2010, Bangkok

ISO Standards for use in the oil & gas industry

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

ISO 15156-1 Selection of cracking resistant materials for use in H₂S environments
ISO 15156-2 Cracking-resistant steels and cast irons for use in H₂S environments
ISO 15156-3 Cracking-resistant alloys for use in H₂S environments
ISO 15138 HVAC
ISO 15544 Emergency response (Amd)
ISO 15663 Life cycle costing, Parts 1-3
ISO 17776 Assessment of hazardous situations
ISO 20815 Production assurance and reliability management (New)
ISO/TS 27469 Method of test for offshore fire dampers (New)
ISO/TS 29001 Sector-specific quality management systems

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 19901-6 Marine operations (New)
ISO 19902 Fixed steel offshore structures
ISO 19903 Fixed concrete offshore structures
ISO 19904-1 Floating offshore structures

ISO 3977-5 Gas turbines - procurement
ISO 10428 Sucker rods (Rev)
ISO 10431 Pumping units (Rev)
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
ISO 10439 Centrifugal compressors
ISO 10440-1 Rotary-type positive-displacement process compressors (oil-free)
ISO 10440-2 Rotary PD packaged air compressors
ISO 10441 Flexible couplings - special
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 (Cor)
ISO 13705 Fired heaters for general service
ISO 13706 Air-cooled heat exchangers

ISO 13707 Reciprocating compressors
ISO 13709 Centrifugal pumps (Rev)
ISO 13710 Reciprocating positive displacement pumps
ISO 14691 Flexible couplings - general (Rev)
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
ISO 17292 Metal ball valves
ISO 21049 Centrifugal and rotary pumps shaft sealing
ISO 23251 Pressure-relieving and depressuring systems (Amd)
ISO 23926-1 Thermoplastics (New)
ISO/TS 24817 Composite repair of pipework
ISO 25457 Flares details (New)
ISO 28300 Venting of storage tanks (New)

ISO 13624-1 Marine drilling riser systems (New)
ISO 13625 Marine drilling riser couplings
ISO 19901-7 Station-keeping systems for floating offshore structures (Rev)

ISO 13628-1 Subsea production systems
ISO 13628-2 Subsea flexible pipe systems
ISO 13628-3 Subsea TFL pumpdown systems
ISO 13628-4 Subsea wellhead and tree equipment
ISO 13628-5 Subsea control umbilicals (Rev)
ISO 13628-6 Subsea production controls

ISO 13628-7 Completion/workover riser system
ISO 13628-8 ROV interfaces
ISO 13628-9 ROV intervention systems
ISO 13628-10 Bonded flexible pipe
ISO 13628-11 Flexible pipe systems for subsea and marine applications (Cor)

ISO/TR 10400 Calculations for OCTG performance properties
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
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
ISO 10426-1 Well cementing (Rev)
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 10426-6 Static gel strength of cement formulations (New)
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 (Rev)
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 (Amd)
ISO 13503-3 Testing of heavy brines
ISO 13503-4 Measurement of stimulation & gravelpack fluid leakoff
ISO 13503-5 Measurement of long term conductivity of proppants
ISO 13678 Thread compounds (Rev)
ISO 13679 Connection testing
ISO 13680 CRA seamless tubes for casing and tubing (Rev)
ISO 14310 Packers and bridge plugs (Rev)
ISO 15136-1 Progressing cavity pump systems (Rev)
ISO 15136-2 Drilling pipe (Rev)
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
ISO 16070 Lock mandrels and landing nipples
ISO 17078-1 Side-pocket mandrels
ISO 17078-2 Flow control devices for side-pocket mandrels
ISO 17078-3 Latches, seats & interface dolls for side-pocket mandrels & flow control devices (New)
ISO 17078-4 Side-pocket mandrels and related equipment (New)
ISO 17824 Sand control screens (New)

ISO 3183 Steel pipe for pipeline transportation systems
ISO 13623 Pipeline transportation systems (Rev)
ISO 13847 Pipeline welding
ISO 14313 Pipeline valves
ISO 14723 Subsea pipeline valves (Rev)
ISO 15589-1 Cathodic protection for on-land pipelines
ISO 15589-2 Cathodic protection for offshore pipelines
ISO 15590-1 Pipeline induction bands (Rev)
ISO 15590-2 Pipeline fittings
ISO 15590-3 Pipeline flanges
ISO 16708 Pipeline reliability-based limit state design
ISO 21329 Test procedures for pipeline mechanical connectors
ISO 21809-1 External polyolefin coatings for pipelines (New)
ISO 21809-2 Fusion-bonded epoxy coatings (Cor)
ISO 21809-3 Field joint coatings for pipelines (New)
ISO 21809-4 Polyethylene coatings (2-layer PE) pipelines used (New)



Standards in brown issued in 2008
 Standards in green are a priority for 2009 issue
 Many of these standards are adopted by API, CEN and other recognised standards bodies

ISO TC67 has published 142 standards.

API has adopted 66 of these as joint API / ISO standards.

CEN has adopted 122 of these as joint European EN ISO standards.

China, Gulf Region, India, Kazakhstan etc. have also adopted many of these ISO standards.

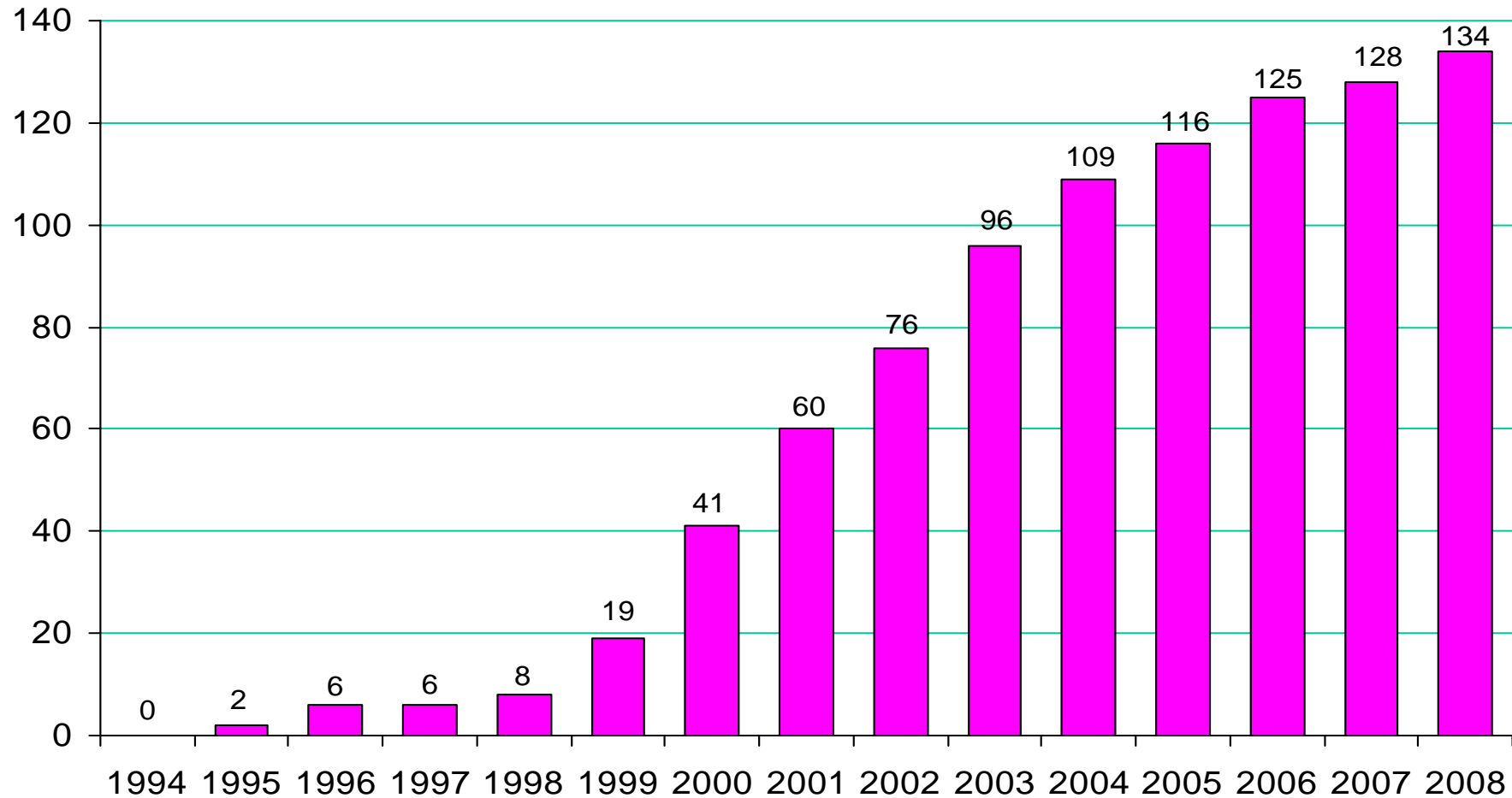
Follow these industry standards

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ISO/TC 67 accomplishments:



Cumulative number of documents published



Note: excluding "fasttrack" ISOs

Subjects for publication in 2010 - 1

- ISO 20312 – P&ngi - Recommended practice for design and operating limits of drill stem of aluminium drill string
- ISO 21457 – Pp&ngi – Materials selection and corrosion control for oil and gas production systems
- ISO 28460 – P&ngi – Installation and equipment for liquified natural gas – Ship to shore interface
- ISO 21809-4 – P&ngi – External coatings for buried and submerged pipelines used in pipeline transportation systems – Part 4: Polyethylene coatings (2- layer PE)
- ISO 21809-5 – P&ngi – External coatings for buried and submerged pipelines used in pipeline transportation systems – Part 5: External concrete coatings
- ISO TS 12747 – P&ngi – Pipeline transportation systems – Pipeline life extension
- ISO 10426-2 – P&ngi – Cements and materials for well cementing – Part 2: Testing of well cements
- ISO 10407-1 – P&ngi – Rotary drilling equipment – Part 1: Drill stem design and operating limits
- ISO 13534 – P&ngi – Drilling and production equipment – Inspection, maintenance, repair and remanufacture of hoisting equipment
- ISO 13535 – P&ngi – Drilling and production equipment – Hoisting equipment
- ISO 17078-4 – P&ngi – Drilling and production equipment – Part 4: Practices for side pocket mandrels and related equipment

Note:

P&ngi – Petroleum and natural gas industries

Pp&ngi – Petroleum, petrochemical and natural gas industries

Subjects for publication in 2010 - 2

- ISO 28781 – P&ngi – Downhole equipment - Subsurface tubing mounted formation barrier valves and related equipment
- ISO 13628-1 – P&ngi – Design and operation of subsea production systems – Part 1: General requirements and recommendations
- ISO 13628-4 – P&ngi – Design and operation of subsea production systems – Part 4: Subsea wellhead and tree equipment
- ISO 13628-5 – P&ngi – Design and operation of subsea production systems – Part 5: Subsea control umbilicals
- ISO 11960 – P&ngi – Steel pipes for use as casing and tubing for wells
- ISO 13679 – P&ngi – Procedures for testing casing and tubing connections
- ISO 19901-3 – P&ngi – Specific requirements for offshore structures – Part 3: Topsides structure
- ISO 19901-6 – P&ngi – Specific requirements for offshore structures – Part 6: Marine operations
- ISO 19901-7 – P&ngi – Specific requirements for offshore structures – Part 7: Stationkeeping for floating offshore structures and marine offshore units
- ISO 19906 – P&ngi – Arctic offshore structures

Note:

P&ngi – Petroleum and natural gas industries

Pp&ngi – Petroleum, petrochemical and natural gas industries



INTERNATIONAL
STANDARD

ISO
13709

First edition
2003-07-01

**Centrifugal pumps for petroleum,
petrochemical and natural gas industries**

*Pompes centrifuges pour les industries du pétrole, de la pétrochimie et
du gaz naturel*

**Centrifugal Pumps for Petroleum,
Petrochemical and Natural Gas
Industries**

**ANSI/API Standard 610
Tenth Edition, October 2004**

**ISO 13709: 2003, (Identical) Centrifugal pumps for
petroleum, petrochemical and natural gas industries**

13709:2003(E)



**Helping You
Get The Job
Done Right.™**



Reference number
ISO 13709:2003(E)

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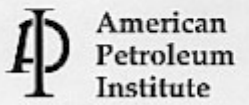
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Air-Cooled Heat Exchangers for General Refinery Service

API Standard 661, Fifth Edition
March 2002

ISO 13706: 2000, Petroleum and Natural Gas Industries—Air-cooled Heat Exchangers



Helping You
Get The Job
Done Right.™



EUROPEAN STANDARD **EN ISO 13706**
NORME EUROPÉENNE
EUROPÄISCHE NORM April 2000

ICS 75.180.20

English version

Petroleum and natural gas industries - Air-cooled heat exchangers (ISO 13706:1998)

Industries du pétrole et du gaz naturel - Echangeurs de chaleur refroidis à l'air (ISO 13706:1998)

Eröl- und Erdgasindustrien - Luftgekühlte Wärmetauscher (ISO 13706:1998)

This European Standard was approved by CEN on 15 April 2000.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Steensart, 36 B-1050 Brussels

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Ref. No. EN ISO 13706:2000 E

Recommendation

1. Use ISO/IEC guide 21 for the procedure for national adoption of ISO/IEC standards
2. Adopt as many as possible ISO/IEC standards with as few changes as possible

Way forward

- ISO/TC67 has a solid portfolio of standards for equipment for our industry.
- They are developed by experts from oil companies, manufacturers, certification bodies and regulators from all over the world.
- Increasingly, they are used by companies and accepted by regulators around the world.
- “Cooperation, not competition” in standards.

Possible outcomes of this workshop

- A representative of Thailand oil and gas industry to participate in next plenary meeting of ISO/TC 67.
- Thailand to decide to have a national shadow committee to ISO/TC 67.
- Thailand to become a Participating member of ISO/TC 67.



Thank you for your invitation to
International Standards Workshop, Bangkok,
to share this with you

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