

Trends and developments - International Standards for the Oil and Gas Industry

Neftegazstandardt - 2010

Salekhard

21-23 Sept 2010

Neil Reeve, ISO/TC67 Chair

Purpose

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

- Mission, vision, goals
- Scope, structure
- Recent changes – New Secretariats
- Composition
- Present working program
- ISO/API/CEN collaboration – Co-branded standards
- Way forward

Objective: To facilitate closer relationship between Russian Federation TK23 and ISO/TC67

ISO/TC 67

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

Scope: Standardization of the materials, equipment and offshore structures used in the drilling, production, transport by pipelines and processing of liquid and gaseous hydrocarbons within the petroleum, petrochemical and natural gas industries. Excluded: aspects of offshore structures subject to IMO requirements (ISO / TC 8).

CEN/TC 12 has almost identical scope. It excludes standards for European gas pipeline distribution systems (in CEN/TC234)

ISO/TC 67 Vision

A stylized globe with green continents and blue oceans, centered on the Atlantic Ocean. Overlaid on the globe is the text "Global Standards Used Locally Worldwide" in a yellow, serif font.

Global
Standards
Used Locally
Worldwide

ISO/TC 67 statements

Mission:

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

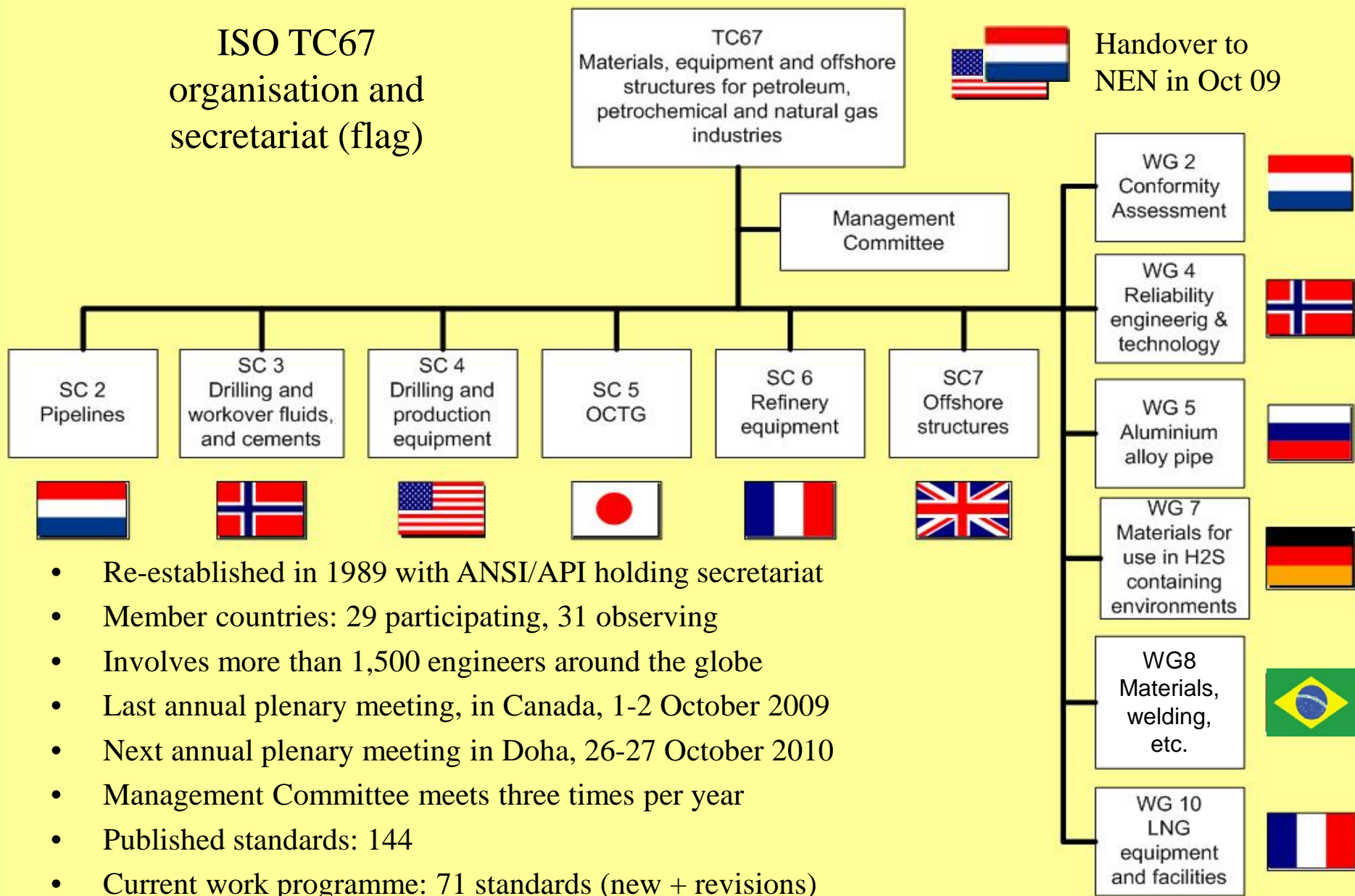
Vision:

Global standards used locally worldwide

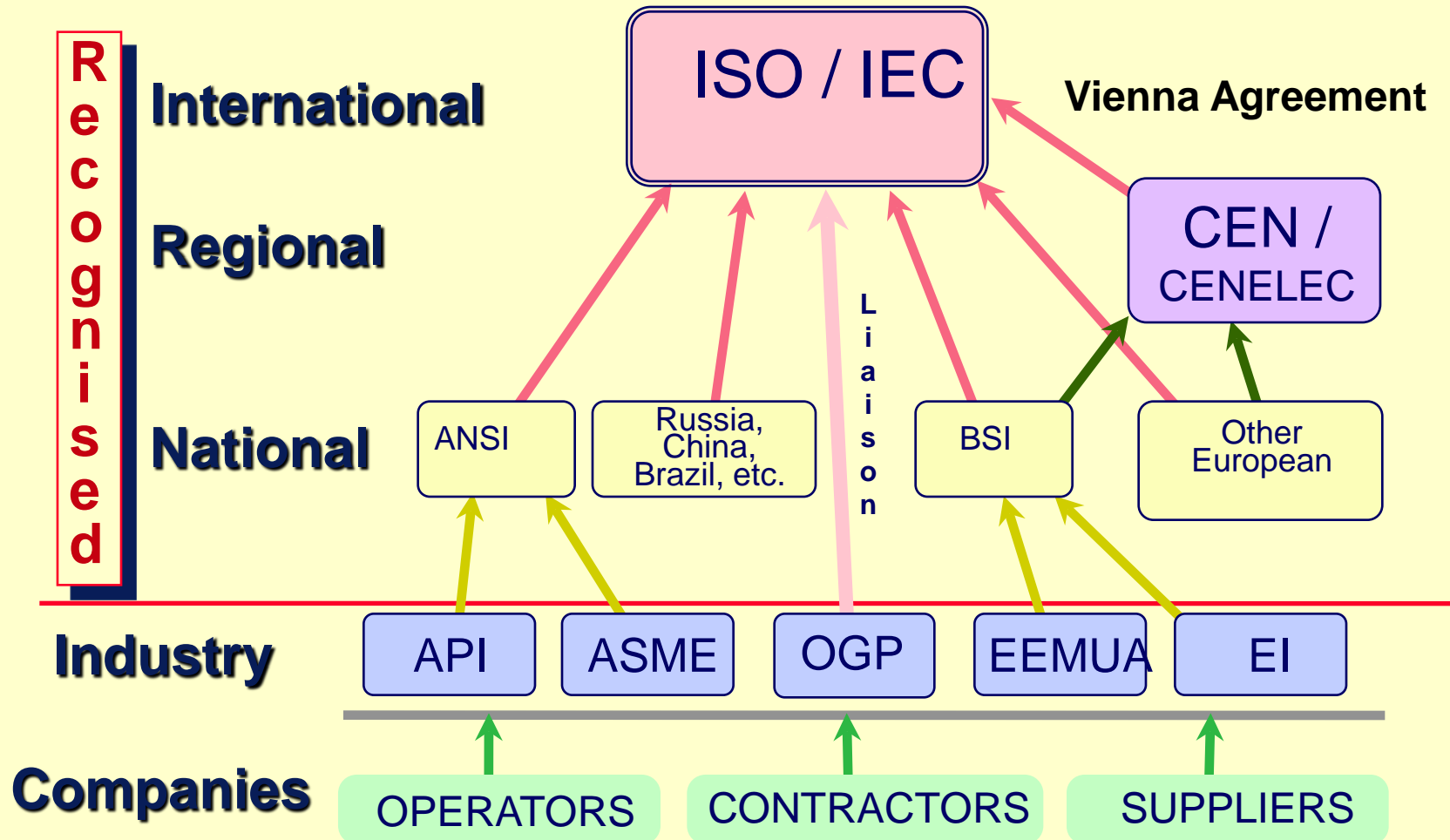
Goals:

- Prepare standards required by this industry
- Prepare standards that could be adopted worldwide by bodies such as ABNT (Brazil), API (USA), CEN (Europe), GOST R (Russian Federation), GSO (Gulf Region) and SAC (China)
- Prepare standards that are recognized by regulators
- 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)



Standardization Bodies - Relationships



Members of ISO/TC 67

29 Participating (P) Members:

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

31 Observer (O) Members:

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

A world map illustrating the global distribution of IAALD members. The map uses two colors to distinguish between different types of membership: light blue for Participating Members and red for Observing Members. Participating Members are concentrated in North America (USA and Canada), Europe (including the UK, France, Germany, and Scandinavia), and parts of Asia (Japan and South Korea). Observing Members are found in South America (primarily Brazil and Chile), Africa (notably Egypt and Sudan), the Middle East (including Saudi Arabia and Iran), India, Southeast Asia (Thailand and the Philippines), Australia, and New Zealand. Greenland is colored yellow, indicating it is not a member. The map also shows the outlines of all major landmasses and some smaller islands.

Sept 2010, Salekhard

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)

New Secretariat for ISO/TC67/SC2 Pipeline Transportation Systems (1/4)

- NEN (The Netherlands) is relinquishing SC2 Secretariat (to take TC67 Secretariat)
- Interest shown by China, Russian Federation, Italy and USA
- ISO Central Secretariat asked ISO/TC67 to identify new Secretariat
- ISO/TC67 management Committee established Adhoc Group to identify new Secretariat (in Feb 2010)
- Goal was to bring new countries into leadership positions
- Tripartite agreement made between Russian Federation, Italy and China
- Proposal agreed by ISO/TC67 Management Committee (Washington June 2010)
- Continued on next slide

New Secretariat for ISO/TC67/SC2 Pipeline Transportation Systems (2/4)

Proposal is for Italy (UNI/UNSIDER) to take Secretariat

- Chair to be from Russian Federation
- Secretariat to be twinned with China
- Two Vice-Chairs (one from Italy and one from China)
- ISO/TC67 membership has supported this proposal by resolution (doc ISO/TC67 N 1088, 31 August 2010)
- Handover to follow ISO/TC67 meeting in Doha, 26-27 Oct 2010
- Continued on next slide

New Secretariat for ISO/TC67/SC2 Pipeline Transportation Systems (3/4)

Next steps in accordance with the ISO/IEC directives, after assignment of the Secretariat to UNI/UNSIDER:

- Appointment of the Secretary by UNI/UNSIDER
- Nomination of the Chairman and Vice-chairmen by UNI/UNSIDER for approval by ISO/TC 67
- Submission of the Twinning Arrangement between Italy and China to ISO for registration and notification.
- Anticipate new Secretariat will start work in November 2010.

New Secretariat for ISO/TC67/SC2 Pipeline Transportation Systems (4/4)

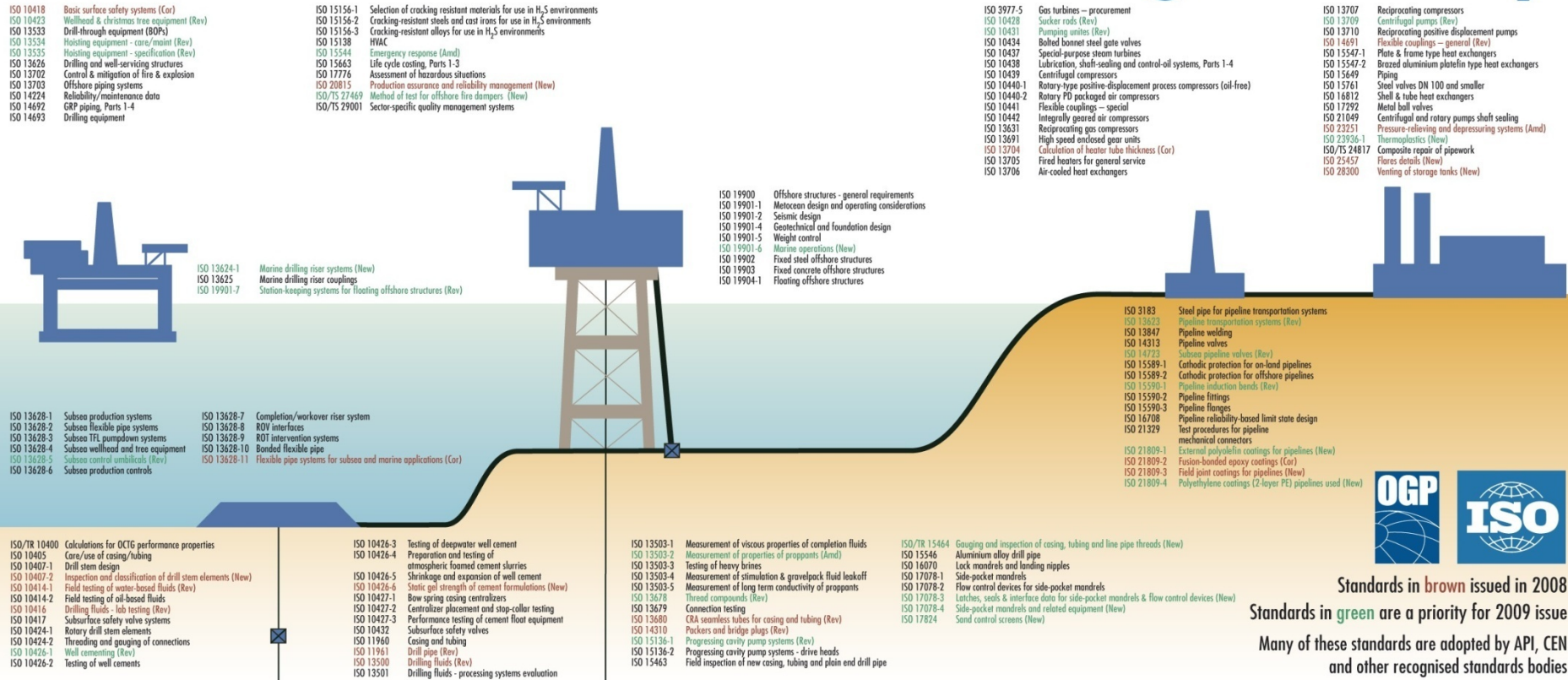
Benefits:

- Pipeline experience from tripartite countries brought into ISO/TC67;
- Deepen experience in Russia and China of ISO process;
- Accelerate sharing of global standards in oil and gas industry;
- Anticipate fuller leadership roles and participation in ISO/TC67 from Russia and China in future.

Other recent changes in ISO/TC67

- New Work Group 8 on Materials (Brazil)
- New Work Group 10 on LNG (France)
- Steadily increasing membership (new: Bahrain, United Arab Emirates, 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

ISO Standards for use in the oil & gas industry



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 144 standards.

API has adopted 72 of these as joint API / ISO standards.

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

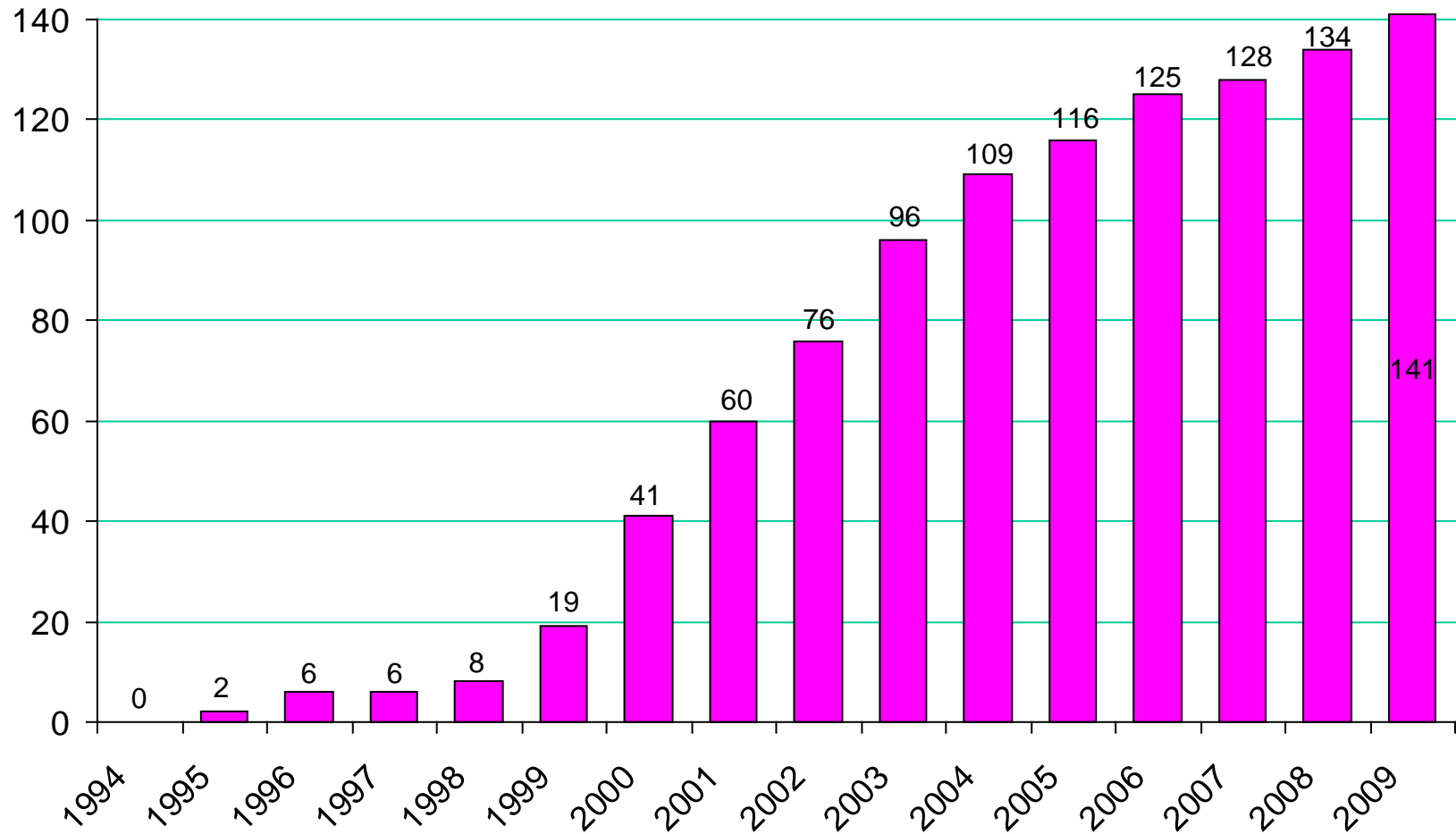
China, Gulf Region, India, Kazakhstan etc. have also adopted many of these ISO standards.

Example: Shell uses these as the basis for their company standards

ISO/TC 67 accomplishments:



Cumulative number of documents published



Note: excluding "fasttrack"ISOs

Standards published by ISO/TC67 in 2009 -1

ISO 14313:2007/Cor 1	Petroleum and natural gas industries -- Pipeline transportation systems -- Pipeline valves -- Technical Corrigendum 1
ISO 11961:2008/Cor 1:	Petroleum and natural gas industries -- Steel drill pipe -- Technical Corrigendum 1
ISO 13628-2:2006/Cor 1	Petroleum and natural gas industries -- Design and operation of subsea production systems -- Part 2: Unbonded flexible pipe systems for subsea and marine applications -- Technical Corrigendum 1
ISO 17078-3	Petroleum and natural gas industries -- Drilling and production equipment -- Part 3: Running tools, pulling tools and kick-over tools and latches for side-pocket mandrels
ISO 23936-1	Petroleum, petrochemical and natural gas industries -- Non-metallic materials in contact with media related to oil and gas production -- Part 1: Thermoplastics
ISO 15544:2000/Amd 1	Petroleum and natural gas industries -- Offshore production installations -- Requirements and guidelines for emergency response -- Amendment 1
ISO 13678	Petroleum and natural gas industries -- Evaluation and testing of thread compounds for use with casing, tubing, line pipe and drill stem elements
ISO 14723	Petroleum and natural gas industries -- Pipeline transportation systems -- Subsea pipeline valves
ISO 17078-2:2007/Cor 1	Petroleum and natural gas industries -- Drilling and production equipment -- Part 2: Flow-control devices for side-pocket mandrels -- Technical Corrigendum 1
ISO 13623	Petroleum and natural gas industries -- Pipeline transportation systems
ISO 13500:2008/Cor 1	Petroleum and natural gas industries -- Drilling fluid materials -- Specifications and tests -- Technical Corrigendum 1
ISO 15463:2003/Cor 1	Petroleum and natural gas industries -- Field inspection of new casing, tubing and plain-end drill pipe -- Technical Corrigendum 1
ISO 17824	Petroleum and natural gas industries -- Downhole equipment -- Sand screens
ISO 28300:2008/Cor 1	Petroleum, petrochemical and natural gas industries -- Venting of atmospheric and low-pressure storage tanks -- Technical Corrigendum 1
ISO 10407-2:2008/Cor 1	Petroleum and natural gas industries -- Rotary drilling equipment -- Part 2: Inspection and classification of used drill stem elements -- Technical Corrigendum 1

Wide range of globally relevant subjects

Standards published by ISO/TC67 in 2009 - 2

ISO 15156-1	Petroleum and natural gas industries -- Materials for use in H ₂ S-containing environments in oil and gas production -- Part 1: General principles for selection of cracking-resistant materials
ISO 15156-2	Petroleum and natural gas industries -- Materials for use in H ₂ S-containing environments in oil and gas production -- Part 2: Cracking-resistant carbon and low-alloy steels, and the use of cast irons
ISO 15156-3	Petroleum and natural gas industries -- Materials for use in H ₂ S-containing environments in oil and gas production -- Part 3: Cracking-resistant CRAs (corrosion-resistant alloys) and other alloys
ISO 13503-2:2006/Amd 1	Petroleum and natural gas industries -- Completion fluids and materials -- Part 2: Measurement of properties of proppants used in hydraulic fracturing and gravel-packing operations -- Amendment 1: Addition of Annex B: Proppand specification
ISO 21809-4	Petroleum and natural gas industries -- External coatings for buried or submerged pipelines used in pipeline transportation systems -- Part 4: Polyethylene coatings (2-layer PE)
ISO 15590-1	Petroleum and natural gas industries -- Induction bends, fittings and flanges for pipeline transportation systems -- Part 1: Induction bends
ISO 13624-1	Petroleum and natural gas industries -- Drilling and production equipment -- Part 1: Design and operation of marine drilling riser equipment
ISO 15136-1	Petroleum and natural gas industries -- Progressing cavity pump systems for artificial lift -- Part 1: Pumps
ISO/TR 13624-2	Petroleum and natural gas industries -- Drilling and production equipment -- Part 2: Deepwater drilling riser methodologies, operations, and integrity technical report
ISO 19901-6	Petroleum and natural gas industries -- Specific requirements for offshore structures -- Part 6: Marine operations
ISO 10426-1	Petroleum and natural gas industries -- Cements and materials for well cementing -- Part 1: Specification
ISO 10423	Petroleum and natural gas industries -- Drilling and production equipment -- Wellhead and christmas tree equipment
ISO 13628-5	Petroleum and natural gas industries -- Design and operation of subsea production systems -- Part 5: Subsea umbilicals

ISO/TC67 Target 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 liquefied natural gas – Ship to shore interface

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

.... and more coming

Note:

P&ngi – Petroleum and natural gas industries

Pp&ngi – Petroleum, petrochemical and natural gas industries

ISO/TC67 Target 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**

Identical standards published by ISO and API



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Petroleum
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Done Right.™**



Reference number
ISO 13709:2003(E)

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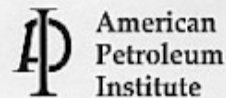
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Air-Cooled Heat Exchangers for General Refinery Service

API Standard 661, Fifth Edition
March 2002

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



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Done Right.™



EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 13706

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)

Erdf- 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.

..... and CEN



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

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.

ISO/TC67/SC2 is the International Standards committee for oil and gas pipeline transportation systems; and aims for global standards used locally worldwide

Final word

As Chair of ISO/TC67 I am delighted that the Russian Federation will take the Chair of the ISO committee for pipeline transportation systems. I will do my best to help with this new responsibility.

Spasiba

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www.iso.org

www.ogp.org.uk