

International Standards and technical specifications in the Oil and Gas Industry

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Introduction

- In order to better understand the role of International standards in our industry, a benchmark exercise was carried out from 2008 amongst a number of Oil and Gas companies under the umbrella of OGP Standards Committee.

OGP Membership

Europe

Addax	DONG	IPIECA	OMV	Total
AMI	Energy Institute	Mærsk	Perenco	Tullow
BG Group	eni	MOL	Premier	WEG
BHP Billiton	Fairfield	NOGEPA	Repsol-YPF	Wintershall
BP	GdF Suez	Oil & Gas UK	Shell	
Cairn	IOOA	OLF	Statoil	

37 members active in region

Russia & Caspian region

NCOC TNK-BP
Shtokman
20 members active in region

Asia & Australasia

APPEA	Papuan Oil Search
CNOOC	PETRONAS
INPEX	PTTEP
ONGC	Woodside

28 members active in region

Middle East

ADNOC	Qatar Petroleum
Dolphin Energy	RasGas
Dragon	SEPOC
Kuwait Oil	Yemen LNG
Mubadala	

33 members active in region

Africa

32 members active in region

South America

ARPEL	IBP
CSC	Petrobras
Hocol	

23 members active in region

North America

Anadarko	IADC
API	IAGC
BakerHughes	Marathon
Chevron	Nexen
ConocoPhillips	Pemex
Devon	Schlumberger
ExxonMobil	Suncor
Hess	Talisman

27 members active in region

Associate Member

Introduction

- In order to better understand the role of International standards in our industry, a benchmark exercise was carried out from 2008 amongst a number of Oil and Gas companies under the umbrella of OGP Standards Committee.
- A selection of findings will be presented in the next slides. You are encouraged to look at the full report which is available on :

▪ www.ogp.org.uk

(on home page, go to 'publications', the benchmark report is at the bottom)

- On the same 'publications page', you can also access :

[Catalogue of international standards used in the oil & gas industry](#)

DEFINITIONS

- ▶ **External standards** are established by consensus between all stakeholders and approved by a recognised body.

They include :

International standards	such as ISO _{xx} and IEC _{yy} ,
Regional standards	such as CEN _{zz} or GSO _{vv} ,
National standards	such as DIN _{tt} ,
Industry standards	such as ASTM _{uu} or API _{pp} .

Some Industry standards have been used worldwide for many decades and have become 'de facto International'.

- ▶ **Internal standards** includes : **Company specifications** (or Design Engineering Practices) prepared by an operator for repeated use, **Project specifications** which are specific for a given project, and include all local parameters.

Procuring materials and equipment

- ▶ *Let's imagine a new compression station has been decided by an operator. The facilities include 4 air-cooled heat exchangers.*
- ▶ A project specification **PS yyyy** will be prepared with all necessary technical data as well as applicable regulations, etc. It will refer to Company specification **CS xxxx** for air-cooled heat exchangers.
PS yyyy is only used once.
- ▶ « Company overlay » **CS xxxx** makes reference to International standard ISO 13706 and lists all the additional requirements that from experience the Company feels necessary for the intended service.
CS xxxx has been used for many years and upgraded several times.
- ▶ *Standardisation work* : ISO 13706 is periodically revised by a group of experts representing all stakeholders. When there is a consensus on some additional requirements, they are included in the revised standard.

Nota : Company specification CS xxxx will also have to be revised.

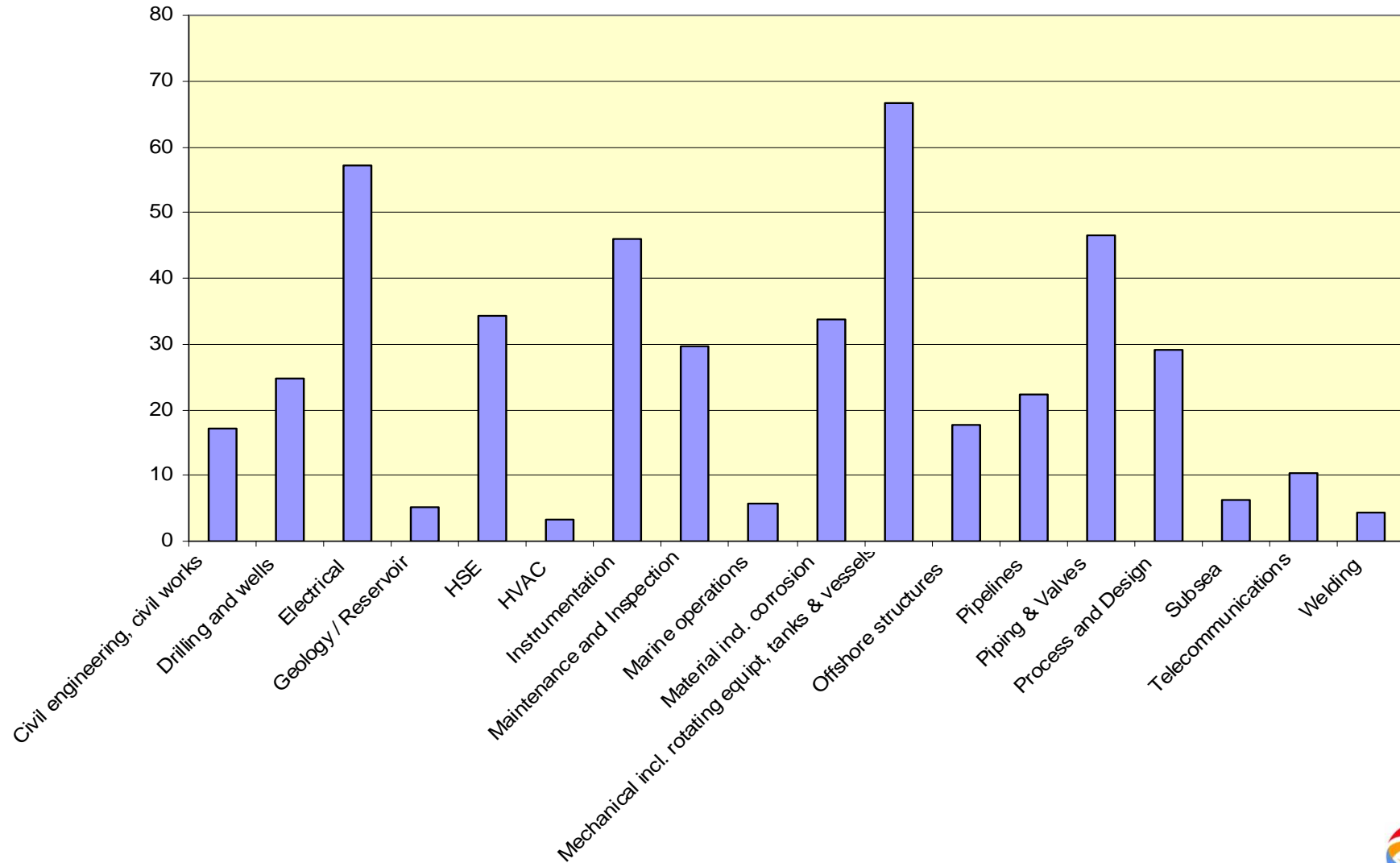
Benchmark exercise

- ▶ **Within OGP membership, it was decided in 2008 that it would be interesting to compare how various Companies were managing their Internal standards and their involvement in standardisation work.**
- ▶ **18 companies (corresponding to 1/3 of worldwide production of oil and gas) replied to a questionnaire, and all collected data was processed.**
- ▶ **Further work was possible with 8 companies that also gave access to the content of their portfolio of Company specifications.**
- ▶ **From one company to the next, a very contrasted picture of portfolios could be noticed.**
- ▶ **Reducing the number and volume of company specifications could be a desirable goal.**

Main findings

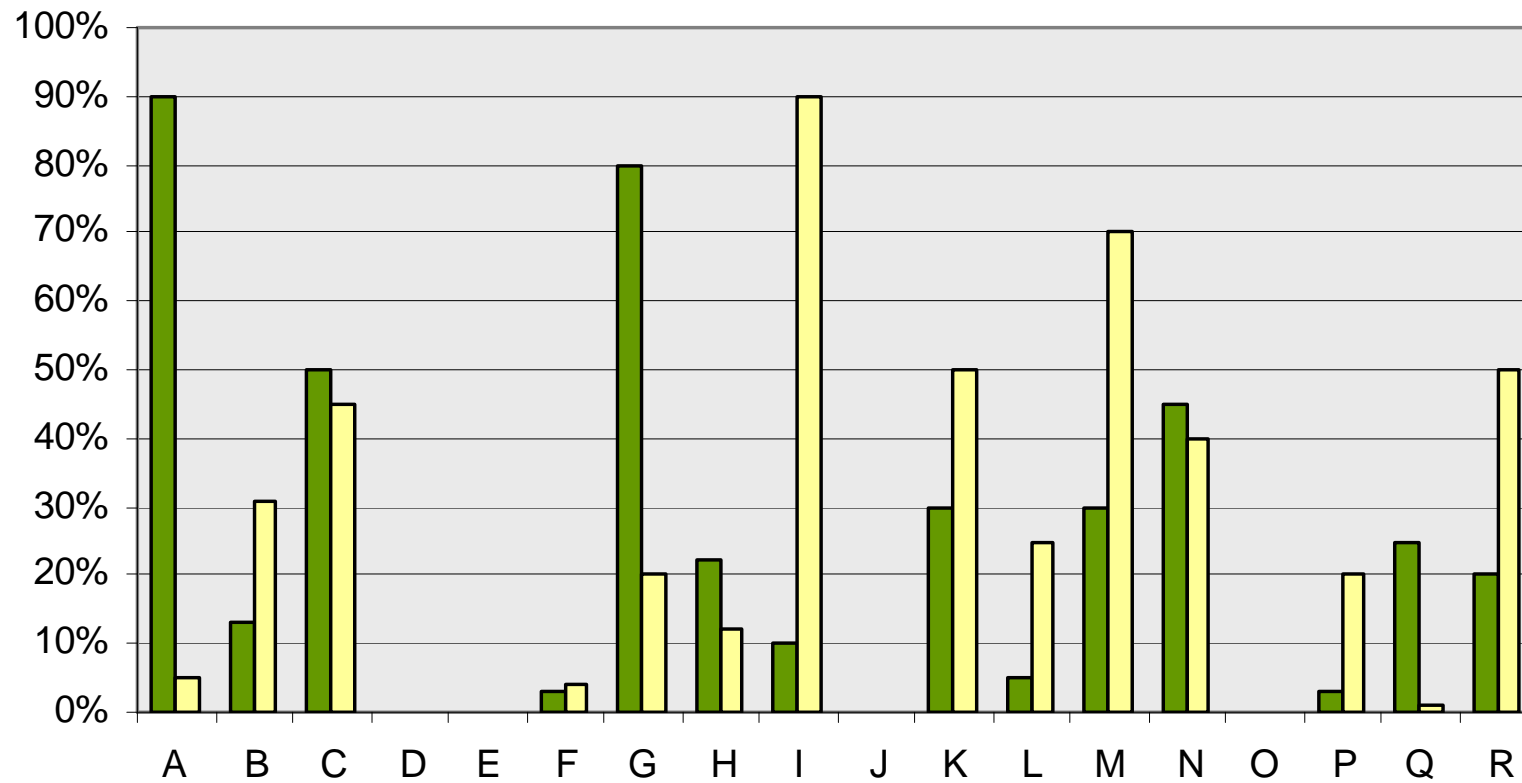
- ▶ This benchmark exercise has pointed out a number of interesting parameters describing Company internal standards. A few of them are presented in the following figures regarding :
 - ▶ Engineering disciplines
 - ▶ International standards vs. other external standards
 - ▶ Number of references
 - ▶ Standards organisations

Average number of documents by discipline

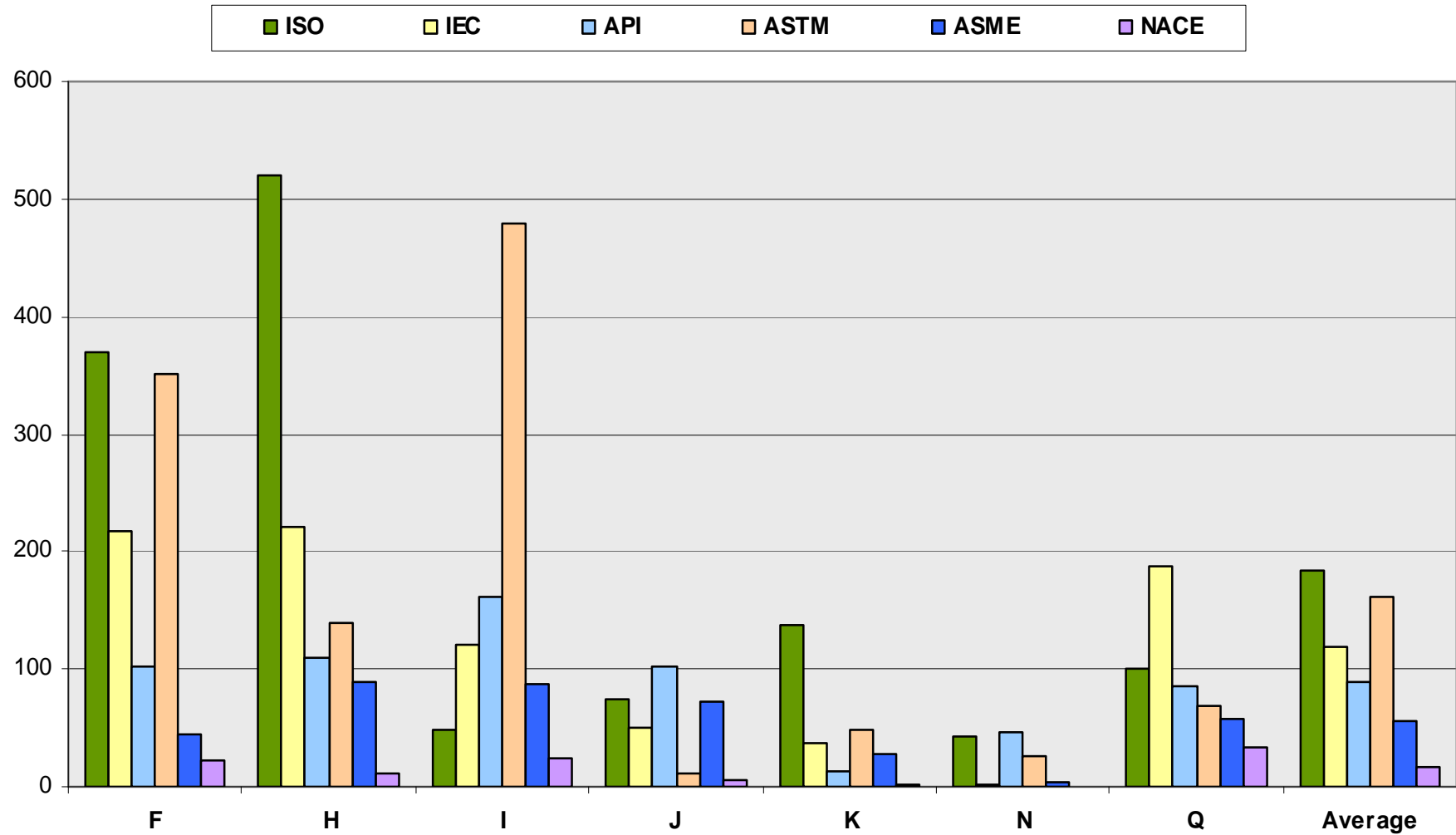


Company Specifications are based on :

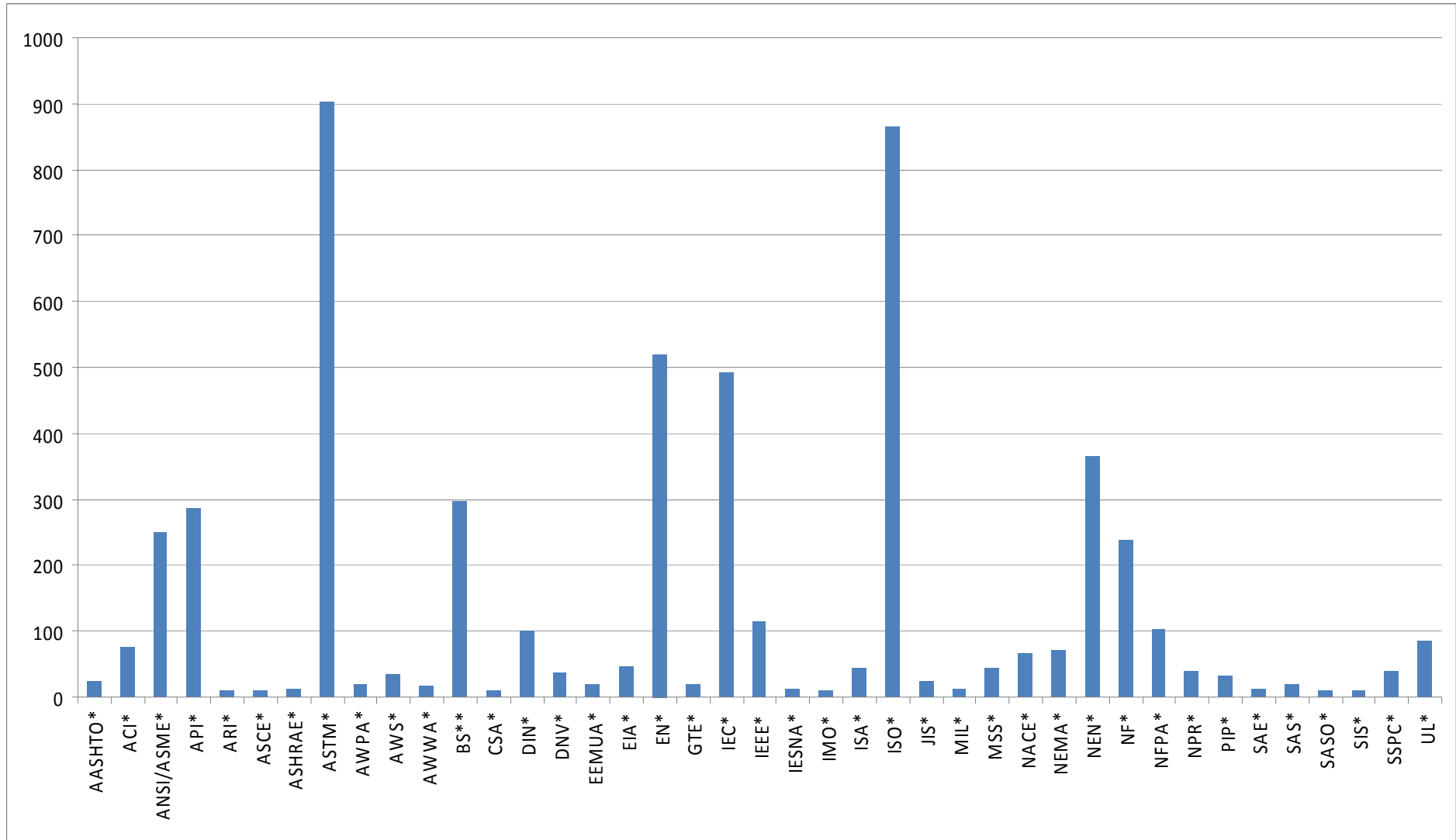
■ international standards ■ other external standards



Number of standards referenced in the company specifications



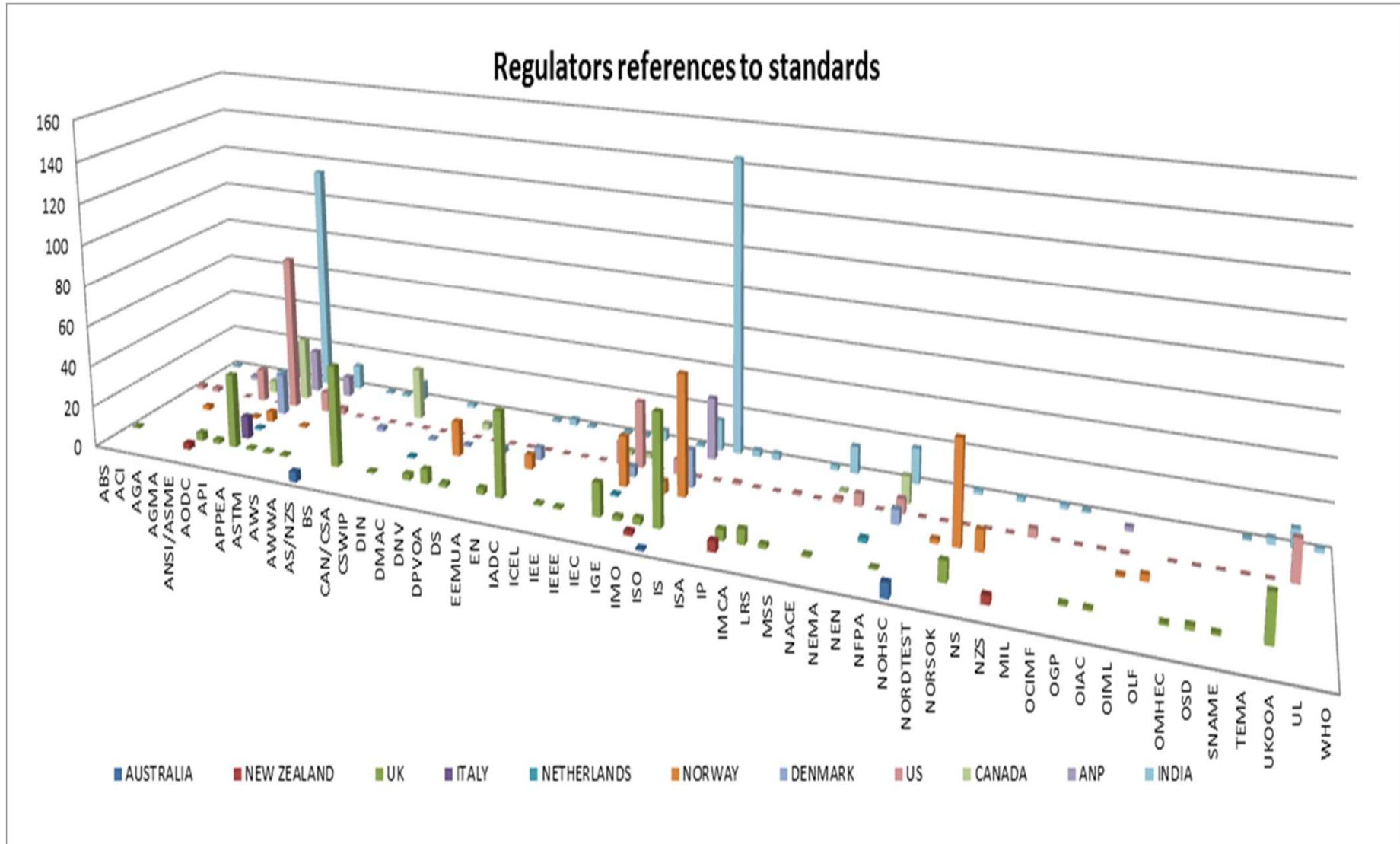
Number of standards sorted by standards organisation



Regulations

- ▶ An external standard can be mentioned in a Regulation, and then the requirements of the standard become **mandatory**.
- ▶ In a separate exercise, the standards chosen by 14 regulators for the « Offshore oil and gas industry » were analysed in order to detect any trend, or any need for improvement in standardisation work.
- ▶ The main finding was the very large diversity of referenced standards.

A picture difficult to read



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- ▶ In a separate exercise, the standards chosen by 14 regulators for the « Offshore oil and gas industry » were analysed in order to detect any trend, or any need for improvement in standardisation work.
- ▶ The main finding was the very large diversity of referenced standards.
- ▶ 87 % of referenced standards are mentioned by only one Regulator.

- ▶ *Improved collaboration between standards developers and Regulators, possibly through increased involvement of experts from regulatory bodies in Working Groups writing International standards, is a possible way forward.*

Conclusions

- ▶ External standards, and in particular International standards, are playing an important role in the definition of what our industry needs for various development projects.
 - ▶ Involvement of all stakeholders in standardisation work is the key for increasing technical integrity and compatibility of our facilities.
 - ▶ Having a comprehensive and coherent set of Global standards will also facilitate interfacing with Regulators.
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- ▶ Thank you for your attention.

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