MCE Deepwater Development 2017 💳

DEVELOPMENT OF SUBSEA REGULATIONS IN THE NORWEGIAN PETROLEUM INDUSTRY – FOLLOW UP AND USE OF STANDARDS

Trond Sundby

Petroleum Safety Authority, Norway





NH GRAND HOTEL KRASNAPOLSKY • AMSTERDAM • 3-5 APRIL 2017

Petroleum Safety Authority (PSA)

- Independent regulator from 2004
- Regulator for technical and operational safety, including emergency preparedness, and for the working environment in all phases of the petroleum activity
- Report to the Ministry of Labour and Social Affairs
- About 170 employees
- Collaborate with other HSE regulators nationally and internationally

Area of responsibility

- 350 subsea installations
- 95 Fixed installations (platforms)
- 16 000 km pipelines







MCE Deepwater Development 2017

Main features of the regulations

- The regulations are based on performance (functional) requirements, which:
 - give the industry the freedom to choose its own best solutions
 - underpin the allocation of responsibility
 - refer to norms and industry standards, providing predictability for users and indicating the standard which solutions are expected to meet.
- The regulations require the companies to set risk targets and to manage their operations in relation to these.





Development of Petroleum HSE regulations in Norway





What is a standard?

Definition:

- a document developed, by consensus and endorsed by recognised institutions
- contains a set of specific requirements and recommendations relating to equipment, systems, processes and services including operations
- developed with a transparent process and include all relevant stakeholders to facilitate consensus (Examples: ISO Global; NORSOK National)

They are an asset of accumulated experience and used by all stakeholders in the industry





Hierarchy of standards and referenced standards



Totalt	171	171	100 %
API	2		
DEA (Energistyrelsen)	1		
IMCA	1		
DNV	21		
EDTC	1		
NT (NordTest)	2		
Energy institute	1		
IMO	6		
NR	2		
NOROG	6	43	25 %
INSTA	1		
NS	4		
NEK	3		
NORSOK	49	57	33 %
EN	19		
ISO	41		
IEC	11	71	42 %



Management regulations Section 24 Use of recognised standards

- When the responsible party makes use of a standard recommended in the guidelines, the responsible party can <u>normally assume</u> that the regulatory requirements have been met.
- When <u>other solutions than those recommended</u> in the guidelines are used, the responsible party shall be able to <u>document that the chosen</u> <u>solution fulfils the regulatory requirements</u>.



History of subsea standards ISO/API

- Early API Standards
 - Standard materials and dimensions
- ISO/API Specification 6A / ISO 10423
 - Its development and design rules
- ISO/API Specification 16A / ISO 13533
 - Differences from 6A
- ISO/API Specification 17D / ISO 13628-4
 - Different applications and scope







API 17 series

Subsea standards



Summary

- Prudent activities, risk reduction, continuous improvement, barrier management
- Challenges:
 - Interfaces in non-overlapping standards
 - Wellhead fatigue
 - International standardisation
 - Material specifications
- Standardisation \leftarrow > Technology development
 - Sharing of information and experiences
 - Update with latest knowledge







Functional requirements – opportunities for the industry



Safety – status and signals -New issue

Read more about the background to the PSA's main issue for 2017. What is the position? What is needed to reverse the trend?

Read webzine



