

NORSOK D-010 REVISION

D-010 Well integrity in drilling and well operations

-

P&A Seminar 18.10.2018

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Presentation overview

- Goals for petroleum standardisation in Norway
- Organisation of standards revision work
- The four NORSOK Drilling standards
- D-010 revision project
 - Overview
 - Milestones
 - Work process
 - Status

Goals for petroleum standardisation in Norway

The goals of the NORSOK organisation are to:

- Ensure a high standard of safety
- Increase the use of international standards
- Reduce the number of requirements specific to Norway
- Reduce the number of company specific requirements
- Ensure that standards represent cost-effective solutions
- Increase the competitive strength of the Norwegian continental shelf

Organization of drilling standardisation work

NORSOK Owners

Federation of Norwegian Industries, Norwegian Shipowners Association, Norwegian Oil and Gas Association

Sector Board Petroleum Industry

Tri-partite executive committee,
responsible for standardization work

Standard Norway

Contracted by the NORSOK owners to administer
the portfolio of 79 standards

NORSOK Expert Group – Drilling

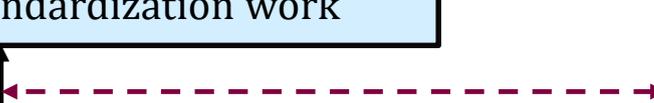
Responsible for the content of the four
standards within drilling

Drilling Managers Forum

Norsk Olje & Gass, Operators forum

D-010 Revision project

Project manager and work groups



The four NOROK D-standards (drilling)

| Standard | Name | Current revision | Open industry pre-hearing¹⁾ | Expected publication of new revision²⁾ |
|-----------------|--|-------------------------|---|--|
| D-010 | Well integrity in drilling and well operations | Rev 4, 06.2013 | 03.2017 | 06.2019 |
| D-001 | Drilling facilities | Rev 3, 12.2012 | 12.2017 | 12.2019 |
| D-002 | Well intervention equipment | Rev 2, 06.2013 | 08.2018 | 12.2019 |
| D-007 | Well testing system | Ed 2, 09.2013 | 08.2018 | 12.2019 |

Notes:

¹⁾ Via <http://www.standard.no/standarder-pa-horing/>

²⁾ Dates are tentative

D-010 revision project: Overview

- Follows «NORSOK direktiv A-001»
- This will be revision 5
- Follows five year revision cycle
- Project manager is Arild Thorsrud
- Drilling Managers Forum and NORSOK Expert Group Drilling will be actively used in the quality assurance process
- Organised in 10 work groups
- Has approximately 50 participants from
 - Oil companies
 - Major service companies
 - Specialist companies
 - Petroleum Safety Authority (observers)
- For more information regarding petroleum standardization, see
 - <http://www.standard.no/en/sectors/energi-og-klima/petroleum/>

D-010 revision: Project milestones

| Milestone | Date |
|--|-------------|
| Open industry pre-hearing | 2017.03 |
| Revision project approved | 2017.09 |
| Revision commenced, work groups formed | 2017.11 |
| Drafting chapters | Ongoing |
| Draft document out for hearing | 2019.01 |
| Assessment of comments, text adjustments | 2019.02-04 |
| Publication of Revision 5 | 2019.06 |

The D-010 revision: Work process

1. Pre-hearing suggestions (300 +) were distributed between 10 work groups
2. Discussions in work groups
3. Work groups develop new suggested wording to chapter editors
 - According to consensus principle
4. Chapter editors revise chapters in cooperation with the relevant group leader
5. Project leader compiles the new chapters into a new draft document (revision 5)
6. Draft document is sent on open industry hearing
 - Focus for hearing will be on **revised text only**. ~~Deleted text will look like this~~
7. Review and decide on comments from hearing
8. Develop final text and get approval from Sector Board
9. Publication of NORSOK D-010 revision 5

Status of D-010 revision per October 2018

- All comments have been assessed
- Some chapters are in the process of being written up by chapter editors
- Discussions are still ongoing within some of the work groups
 - P&A requirements
 - Barrier requirements
 - Managed Pressure Drilling requirements
- Coordination across work groups is necessary
- Commencing update of approximately 55 barrier drawings

Questions?