



MANAGING RISK

DNV

# Certification of Fibre Ropes for Offshore Mooring



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## New Offshore Standard from DNV

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MTS Rope Technology Workshop - November 8 – 9, 2007.

# Motivation for new standard

- The existing Standard for Certification 2.13 was issued 1999.
- Need to take recent experience into account.
- The existing standard is very “technical”; little guidance is given on the process.
  
- Also:
  - Requests to install fibre ropes with sea-bed contact are increasing.
  - Requests to use ARELIS are increasing.
  - Requests to use flexible change-in-length test methods are increasing.
  - New ISO standard has been published 2007.

# Changes SC 2.13 -> OS-E303

- Technical requirements: Very small changes.
- Description of process: Chronological description included.
- New methods: Not treated as deviations/variations.
  - ARELIS. (Conditional use / Subject to qualification.)
  - Universal test methods. (Conditional use.)
  - Sea-bed contact. (Subject to qualification.)
- Test methods:
  - Permanent systems: No change.
  - MODU systems: Using ISO18692.
- Documentation requirements: No change, except the description of the process better defines the responsibilities.

# Changes SC 2.13 -> OS-E303

- Testing on subropes: Encouraged.
  - More tests on same sample: Encouraged.
  - Number of test samples: Slightly higher.
  - Test procedures: Less stringent.
  - Deviations and test waivers: Mentioned specifically.
- If a manufacturer or user wishes to deviate from the requirements of this Offshore Standard then thoroughly documented applications for waiver of test or deviation shall be submitted for approval by DNV-Høvik\*. Any such deviation or test waiver should be included in the Request for Certification.
- *\*Footnote: "DNV-Høvik" is used throughout this standard as an indication of the DNV unit responsible for the design verification and certification. This is not necessarily a DNV unit located at Høvik, Norway.*

- User specification.
  - In-service condition assessment scheme and inspection plans.
  - Key data from design analysis.
  - Type of service.
- Request for Certification.
- Manufacturing specification.
- Installation and handling procedures or -requirements.

- New standard now on hearing until February 2, 2008.
- It will be issued April 2008.
- It will be replaced again in 2011 when the confidentiality periods for ongoing joint industry projects in this field have expired.
  - Service life management using ARELIS.
  - Universal test methods for rope change-in-length performance, that provide detailed design data in advance of rope acquisition.
- To participate in the hearing, please contact us afterwards or send e-mail to:
  - [vidar.ahjem@dnv.com](mailto:vidar.ahjem@dnv.com).

# Areas of improvement

- Section on yarn material?
- Alignment with new ISO 18692?
- Reducing the number of standard references?
- Documentation requirements?
- Guidance provided in API-RP-2SM addendum should be mentioned?
- Other?

- In 2011 we will include ARELIS and universal test methods for change-in-length properties.
- A standardized scheme for acceptance of soil barriers for sea-bed installation will probably also be included.
- The link to design analysis will be refined through the universal test methods.
- Change-in-length methods will replace post-installation, drift and storm stiffness as is now identical between SC 2.13 and OS-E303.
- Alignment with new API RP-2SM and ISO 18692 as much as possible.



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