

ISO DIS 19901 - 3 Topsides

20 January 2008

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Sorted on status and action party

Editing panel discussion

| ID | Clause | Location | Country | Status |
|------|--------|----------|---------|---------------------------------|
| 102a | 0 All | General | UK | Editing panel discussion |

Comment The document covers all aspect of Topside design but lacks design guideline & parameters to carry out the actual design. Hence it heavily depends on other references.

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|-----------|----------|---------|---------------------------------|
| 401 | 0 General | | NL | Editing panel discussion |

Comment This DIS is regrettably considerably less mature than expected, especially with a view to consistency with other standards in the ISO 19900 series and editorially.
Also, in some places contents and clarity of technical requirements and guidance raise questions and should be improved.

Proposed Detailed comments are given in this table and its attachment

Reply

| ID | Clause | Location | Country | Status |
|-----|-------------------|------------|---------|---------------------------------|
| 106 | 0 Introduction | New Para 8 | UK | Editing panel discussion |

Comment Add This code is Normative (mandatory) and includes an Annex that is Informative (advisory, guidance or commentary).

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|--------|------------------------|---------|---------------------------------|
| 705 | 01 | Beginning of Page 2 | FR | Editing panel discussion |

Comment The document may also be applied to masts, towers, offloading jetties, trestles.

Proposed The document applies to structural components including the following:

...
masts, towers, offloading jetties, trestles.

Reply

| ID | Clause | Location | Country | Status |
|-----|--------|----------|---------|---------------------------------|
| 109 | 01 | General | UK | Editing panel discussion |

Comment The scope is very confusing and in some cases contradictory. With the exception of fixed structures it is unclear whether specific clauses may or may not be appropriate. This is unacceptable. Only jack-up topsides could be exempted (and possibly arctic structures) as the main document has not been published for this structural type.

Proposed

Reply

| ID | Clause | Location | Country | Status |
|------|--------|----------|---------|---------------------------------|
| 109a | 01 | General | UK | Editing panel discussion |

Comment It is strongly recommended that someone with ISO, topside and floating structure expertise review and modify the document to make it applicable to floating structure types within the scope of ISO 19904 (both parts).

Proposed

Reply

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| ID | Clause | Location | Country | Status |
|-----------------|---|----------|---------|---------------------------------|
| 602 | 03 | | DK | Editing panel discussion |
| Comment | As different words are randomly used in the ISO for the same please add to terms and def. All changes will here after be shown in italic | | | |
| Proposed | Action factors Partial coefficients, Partial action factors, safety factors, load factors or action factors are variables, factors or coefficients used to scale loads or material properties mostly to increase loads or reduce material properties to achieve a needed safety level. Resistance Strength or capacity of structure determined using loads/actions and material properties with action factors. Resistance factor Air gap ALARP | | | |

Reply

| ID | Clause | Location | Country | Status |
|-----------------|---|----------|---------|---------------------------------|
| 426a | 03.01 | | NL | Editing panel discussion |
| Comment | 1) Maintain consistency of probability level across ISO 19900 series standards. Abnormal values (including accidental events) are defined in ISO 19901-1 and ISO 19902 as having probabilities between 10 ⁻³ and 10 ⁻⁴ per annum. | | | |
| Proposed | 1) To be resolved. | | | |

Reply

| ID | Clause | Location | Country | Status |
|-----------------|---|----------|---------|---------------------------------|
| 603 | 03.03 | | DK | Editing panel discussion |
| Comment | | | | |
| Proposed | Use def. like 3.4 and move 3.012 next to and include stilling tubes | | | |

Reply

| ID | Clause | Location | Country | Status |
|----------------|--|----------|---------|---------------------------------|
| 127 | 03.13 | | UK | Editing panel discussion |
| Comment | The definition is stricter in the Safety Case regulations - safety critical elements are required to prevent and mitigate against major accidents. Their function is defined by performance standards. Failure of non-SCE can still lead to unacceptable consequences. | | | |

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----------------|--|---------------------|---------|---------------------------------|
| 465 | 04.02 | other abbreviations | NL | Editing panel discussion |
| Comment | Consider the need/desirability of also adding: | | | |
| Proposed | AISC API CSA and CISC BS EC FABIG ICAO NS | | | |

Reply

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| ID | Clause | Location | Country | Status |
|-----------------|---|----------|---------|---------------------------------|
| 466 | 05.01 | title | NL | Editing panel discussion |
| Comment | The planning and design process begins with determining "design situations", which is a defined term since ISO 19900. | | | |
| Proposed | Change title to "Design criteria situations" | | | |
| Reply | | | | |

| ID | Clause | Location | Country | Status |
|-----------------|--|-------------|---------|---------------------------------|
| 138 | 05.02 | Para 2 NOTE | UK | Editing panel discussion |
| Comment | Reconsider the wording and description of how ISO 19901-3 applies to structures (e.g. floating and jack-ups) that are also, in part, covered by class rules - WG5 and WG7 may be able to provide advice. | | | |
| Proposed | | | | |
| Reply | | | | |

| ID | Clause | Location | Country | Status |
|-----------------|------------------------------------|----------|---------|---------------------------------|
| 841 | 05.03 | | US | Editing panel discussion |
| Comment | L-0 Classification is not defined. | | | |
| Proposed | Define L-2 Classification | | | |
| Reply | | | | |

| ID | Clause | Location | Country | Status |
|-----------------|-------------|----------|---------|---------------------------------|
| 139 | 05.03 | Note | UK | Editing panel discussion |
| Comment | Remove Note | | | |
| Proposed | | | | |
| Reply | | | | |

| ID | Clause | Location | Country | Status |
|-----------------|--|----------|---------|---------------------------------|
| 470 | 05.04 | overall | NL | Editing panel discussion |
| Comment | Deck elevation (5.4.2) is a crucially important design consideration, which merits a separate subclause rather than one of several under 5.4 | | | |
| Proposed | Change 5.4.2 into a separate subclause 5.4, or even 5.3. Adjust subclause numbering as necessary. | | | |
| Reply | | | | |

| ID | Clause | Location | Country | Status |
|-----------------|--|----------|---------|---------------------------------|
| 140 | 05.04.01 | | UK | Editing panel discussion |
| Comment | Performance standards specify the requirements for SCEs. | | | |
| Proposed | | | | |
| Reply | | | | |

| ID | Clause | Location | Country | Status |
|-----------------|--|----------|---------|---------------------------------|
| 143 | 05.04.02 | | UK | Editing panel discussion |
| Comment | Add sentence regarding possibility of reassessment being performed following either revised (higher) wave crest or structural subsidence where the wave can impact the deck. | | | |
| Proposed | | | | |
| Reply | | | | |

| ID | Clause | Location | Country | Status |
|-----------------|---|----------|---------|---------------------------------|
| 610 | 05.06 | | DK | Editing panel discussion |
| Comment | Existing fatigue damage to be considered/determined ? | | | |
| Proposed | | | | |
| Reply | | | | |

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| ID | Clause | Location | Country | Status |
|------|--------|----------|---------|--------------------------|
| 473c | 05.06 | line 4 | NL | Editing panel discussion |

Comment 3) "This inspection" seems out-of-place.

Proposed 3) Change to "This The inspection ..."

Reply

| ID | Clause | Location | Country | Status |
|-----|--------|----------|---------|--------------------------|
| 149 | 06 | | UK | Editing panel discussion |

Comment Increase requirement to include dynamic analysis and avoidance of resonance - Shell can supply some words

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|----------|---------|--------------------------|
| 852 | 06.04.03 | | US | Editing panel discussion |

Comment Why is it necessary to distinguish between the various deflection components rather than just limiting the total deflection?

Proposed Consider only a maximum deflection

Reply

| ID | Clause | Location | Country | Status |
|------|----------|------------|---------|--------------------------|
| 487b | 06.04.03 | def. of D2 | NL | Editing panel discussion |

Comment 2) Consistency of terminology.

Proposed 2) Change "variable loading" to "variable actions".

Reply

| ID | Clause | Location | Country | Status |
|-----|--------|------------------------------|---------|--------------------------|
| 888 | 07.03 | Table 2, Table 3, Table 4 | NO | Editing panel discussion |

Comment National Codes like BS 5400 and NS 3472 are due to be withdrawn as Eurocode 3 now is in force. Direct reference to these standards should be avoided.

Proposed Delete reference to European national codes

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|----------|---------|--------------------------|
| 185 | 07.03.04 | Heading | UK | Editing panel discussion |

Comment Unnecessary restriction. This code was written to apply to topsides structures placed on all types of substructure: fixed, mobiles (including FPSOs and TLPs), but not to their global structural design.

Proposed Remove fixed platforms.

Add This code applies to topside structures supported by any type of substructure, fixed or mobile (including FPSOs and TLPs), but not to the global design of the complete structural system. Any significant structural interaction between the topsides and the substructure shall be modelled explicitly

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|----------|---------|--------------------------|
| 920 | 07.03.04 | Table 4 | CA | Editing panel discussion |

Comment Is the 1st line reference which reads 'Load Condition: Extreme environmental' correct. Table 4 is intended for Fixed Platforms Operating environmental situations.

Proposed Consider revising the 1st line reference to read 'Load Condition: Operating environmental'

Reply

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| ID | Clause | Location | Country | Status |
|-----|----------|-------------------|---------|--------------------------|
| 192 | 07.08.02 | Last para page 17 | UK | Editing panel discussion |

Comment everything past "(see annex A)" does not belong in a structural design guideline

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|---------------------|---------|--------------------------|
| 722 | 07.08.02 | page 18, first para | FR | Editing panel discussion |

Comment The wording More conservative safety factors... is not clear English, and needs modification.

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|--------------------|---------|--------------------------|
| 723 | 07.08.02 | page 18, last para | FR | Editing panel discussion |

Comment The last paragraph is important, and may be missed without a separate header.

Proposed A separate sub-section heading should be inserted above this last paragraph, and below Table 5 (when that is inserted). Suggest 7.8.3 minimum lateral loading

Reply

| ID | Clause | Location | Country | Status |
|-----|--------|----------|---------|--------------------------|
| 199 | 07.10 | | UK | Editing panel discussion |

Comment We believe this section has become out-of-date, particularly wrt fires and explosions. BP have offered to redraft the F&B section (and Annex) on behalf of SC7.

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|--------|----------|---------|--------------------------|
| 199 | 07.10 | | UK | Editing panel discussion |

Comment Other accidental events should perhaps be in a separate section.

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|-------------------------|---------|--------------------------|
| 200 | 07.10.01 | After para 4 on page 20 | UK | Editing panel discussion |

Comment suggest reference to new document FABIG Technical Note 8 "Protection of Piping Systems subject to fires and explosions" 2005 as it covers SCE's in detail

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|----------|---------|--------------------------|
| 202 | 07.10.01 | Para 4 | UK | Editing panel discussion |

Comment I believe that risk to assets is not necessarily appropriate here. It is up to the operator to determine what level of risk to the asset he can tolerate especially for an unmanned platform. ALARP for asset protection may not be appropriate.

Proposed

Reply

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| ID | Clause | Location | Country | Status |
|-----|----------|----------------|---------|---------------------------------|
| 203 | 07.10.01 | Top of page 20 | UK | Editing panel discussion |

Comment The text says "guidance .. is given below" but the following paragraphs are each written as requirements.

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|----------|---------|---------------------------------|
| 205 | 07.10.02 | | UK | Editing panel discussion |

Comment Clause 7.010.2 should not be part of this section and should be dealt separately

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|----------|----------|---------|---------------------------------|
| 208 | 07.10.02 | Figure 2 | UK | Editing panel discussion |

Comment Survival = no loss in serviceability of SCE for event with $P < 10^{-4}$ and $P(\text{loss})$ to be ALARP?

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|-------------|----------|---------|---------------------------------|
| 729 | 07.10.02.01 | | FR | Editing panel discussion |

Comment The language in much of section 7.010.2 seems rather imprecise. There is discussion of those platforms at low risk; any platform considered to be at high risk; an installation at significant risk. Then there is Risk Level 1, etc.

Proposed Clarify text

Reply

| ID | Clause | Location | Country | Status |
|-----|-------------|----------------------------|---------|---------------------------------|
| 210 | 07.10.02.01 | and Risk matrix Table 6 | UK | Editing panel discussion |

Comment Is this task 5 what is the difference between "exposure level" and "exposure category" is it defined in ISO 19902 or is it defined in 7.010.2.4.01 as Risk level 1 level 2 or level 3 in which case 7.010.2.4.01 should say this. Alternatively is task 5 supposed to read "Reassign platform exposure level" instead of "category".

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|-------------|------------------------------|---------|---------------------------------|
| 214 | 07.10.02.01 | bullet point 2) on p. 21: | UK | Editing panel discussion |

Comment probability of exceedance is defined in 7.010.2.3, not 7.010.2.4. Maybe "risk level" in this item should be replaced by "value".

Proposed

Reply

| ID | Clause | Location | Country | Status |
|-----|---------|----------|---------|---------------------------------|
| 324 | A.05.02 | Para 1 | UK | Editing panel discussion |

Comment It is very difficult to follow the discussion where all documents are referred to as Reference [x]. It is recommended that in accordance with other ISO 19900 Standards the commonly referred title is used with the reference number quoted as a superscript, e.g. BS 5950^[x].

Proposed

Reply