

TC 67/SC7 Offshore Structures

Report to TC 67

September 2001

Membership

- **15 P**
- Argentina, Canada, China, Denmark, France, Germany, Indonesia, Italy, Netherlands, Norway, Romania, Russian Federation, Saudi Arabia, UK, USA
- **7 O**
- Australia, Brazil, Egypt, Poland, Spain, South Africa, Yugoslavia
- **4 Liaison**
- IACS, IADC, MMS, OGP

Organisation

TC 67/SC7

BSI

WG1 General Requirements

AFNOR

WG2 Regional Annexes

NNI

WG3 Fixed Steel

ANSI

WG4 Fixed Concrete

NSF

WG5 Floating Systems

ANSI

WG6 Weight Engineering

NSF

WG7 MOU Assessment

BSI

Summary of Progress

- **Produced 3 DIS, 3 CD's and 2 WD's since last report.**
- **Plan to produce 3 FDIS, 2 DIS, 4 CD's and 1 WD in next 12 months.**
- **Plan to commence NWI Arctic Structures (SCC).**

New Document Numbering

- 19900 Petroleum and natural gas industries - General Requirements
for offshore structures**
- 19901-1 Metrocean design and operating considerations**
- 19901-2 Seismic criteria and design process**
- 19901-3 Topsides structure**
- 19901-4 Geotechnical and foundations design considerations**
- 19901-5 Weight Control during engineering and construction**
- 19901-6 Marine Operations**
- 19902 Fixed Steel Structures**
- 19903 Fixed Concrete Structures**
- 19904 Floating Systems**
- 19905 -1 Site-specific assessment of MOU's Jack-ups**
- 19905-2 Jack-ups commentary (Technical Report)**

WG3 Fixed Steel Progress(1)

- The OGP LIP has proven a very good method of delivery when industry volunteer experts are overstretched with sufficient funds to complete to published standard:-**

19900 Gen. Req.(effectively rev 1 of 138191)

19901-1 Metocean

19901-2 Seismic

19901-4 Foundations (100% yes vote)

19902 Fixed Steel Structures

WG3 Fixed Steel Progress(2)

- **In addition to OGP funds UK HSE is funding:-**
 - **Writing of 19901-3 Topsides**
 - **Preparation and updating of a comments database. This is an essential tool to keep track of and demonstrate what has happened to country comments.**

WG4 Fixed Concrete Progress

- **Delivered WD in June and plan CD and DTS in Oct. Aim is to proceed to ISO not TS as advised last year. (Member advice).**
- **CD will be reviewed by BSI ^{British Standards} editor. This will identify effort required for editing and JIP will be proposed to OGP for 02 action.**
- **Work commenced on 19901-6 Marine Operations. Johan Wichers Panel Convenor.**

WG4 Floating Systems Progress

- ^{USD} ~~WG~~ C+ issued to WG5 April 01.
- CD draft D to be issued Sept 01.
- DIS planned for Sept 02.
- New TC 8 Liaison member of WG Dr Jae Wook Lee.

WG6 Weight Engineering Progress

- **DIS issued March 01**
- **Voting P 11 in favour out of 12, M 1 negative out of 17.**
- **Extensive comments from USA and mainly editorial comments from others to be addressed.**

WG7 MOU Site Specific Assessment Progress

- **First WD issued July 01.**
- **Technical views within the industry starting to converge – but still some way to go.**
- **Foundation fixity understanding seeing some significant developments.**

ISO TC67/SC7 Programme of Work

Updated at 16th SC7 Meeting, St Johns, NF, Canada - June 2001 – see also <http://sc7.tc67.net/>

★ = draft is within SC7
 ★ = doc. is publicly available

	1998	1999	2000	2001	2002	2003	2004	2005
ISO 19900 = 13819-1 General Reqmts	See SC7 Resolution 128, London 2000			DIS★ Jul	FDIS★ Jun			
ISO 19901-1 Metrocean			A Jan CD	B Jan DIS★	Feb FDIS★	Apr FDIS★		
ISO 19901-2 Seismic			A Feb CD	B Jan DIS★	Feb FDIS★	Apr FDIS★		
ISO 19901-3 Topsides			A Apr CD	B Dec DIS★	C Nov FDIS★		Jan FDIS★	May FDIS★
ISO 19901-4 Foundations		A Jan CD	B Dec DIS★	Apr FDIS★	Aug FDIS★			
ISO 19901-5 Weight Eng.		A Dec CD	B Feb DIS★	Mar FDIS★	May FDIS★	Oct FDIS★		
ISO 19901-6 Marine ops				WD A Dec	CD B Jun	DIS★ Jun		FDIS★ Aug
ISO 19902 Fixed Steel	C	CD D May		2nd CD E Jun	DIS★ Sep	DIS★ Nov	DIS★ Mar	
ISO 19903 Fixed Concrete		A May CD	B Apr WD	CD & D C Jun	2nd CD E Dec	DIS★ Dec	DIS★ Nov	FDIS★ Feb
ISO 19904 Floating / stationkpng	A Oct Panels 1,2,3	B May CD	C Jul WD	D Sep CD	DIS★ Sep	FDIS★ Nov	FDIS★ Mar	FDIS★ Feb
ISO 19905-1/2 MOUs - Jackups	WG7		WG Draft	A Jul DIS★	B Dec CD	DIS★ Dec		FDIS★ Feb

Denpasar Wash. DC Paris London Milan Perth/Melbourne? Copen-
 St. John's hagen?

Arctic Structures NWI Outline

1. Foreword and application.
2. Categorisation of open sea and coastal ice environments.
3. Methods for measuring ice environment and identifying extreme and operating ice environment design criteria. Extreme and operating criteria to be used in design.
4. Mechanism of load transfer from ice to a structure including effects of scale.
5. Typical ice resistant structural forms, materials and their method of ice load resistance.
6. Construction and quality control requirements for ice specific structural forms eg ice roads across frozen sea ice.
7. Design limit states for ice loading for different ice categories.
8. Structure specific resistance formulations where they differ from the general structural resistance provisions of the Offshore Structures Standard.
9. Load factors appropriate to each ice category and structural form.
10. Ice monitoring and management techniques and their application.
11. Ice scour.
12. Other considerations influenced by structural forms primarily governed by ice loading eg wave action, scour and overtopping on ice islands.

SLIDE
2

SLIDE
3

S
4

Arctic Structures

- **NWI proposed by Canada.**
- **Scope will focus on ice loads and ice specific structural issues.**
- **Timing is about right in that the technical background is approaching the point where a standard can be written and the Industry interest in arctic developments is increasing.**
- **It will aim to deliver a standard in 2005**