Summary of Changes and Current Document Status

FEBRUARY 2012

DET NORSKE VERITAS AS

FOREWORD

DET NORSKE VERITAS (DNV) is an autonomous and independent foundation with the objectives of safeguarding life, property and the environment, at sea and onshore. DNV undertakes classification, certification, and other verification and consultancy services relating to quality of ships, offshore units and installations, and onshore industries worldwide, and carries out research in relation to these functions.

DNV service documents consist of among others the following types of documents:

— *Service Specifications.* Procedual requirements.
— *Standards.* Technical requirements.
— *Recommended Practices.* Guidance.

The Standards and Recommended Practices are offered within the following areas:

A) Qualification, Quality and Safety Methodology
B) Materials Technology
C) Structures
D) Systems
E) Special Facilities
F) Pipelines and Risers
G) Asset Operation
H) Marine Operations
J) Cleaner Energy
O) Subsea Systems

© Det Norske Veritas AS February 2012

Any comments may be sent by e-mail to *rules@dnv.com*

This service document has been prepared based on available knowledge, technology and/or information at the time of issuance of this document, and is believed to reflect the best of contemporary technology. The use of this document by others than DNV is at the user's sole risk. DNV does not accept any liability or responsibility for loss or damages resulting from any use of this document.

CONTENTS

Sec. 1 General **4**

Sec. 2 Current Service Specifications, Standards and Recommended Practices **5**

Sec. 3 Summary of Changes **8**

A. Changes to DNV Service Specifications 8

B. Changes to DNV Standards 8

C. Changes to Recommended Practices 9

SECTION 1
GENERAL

As of October 2010 all DNV service documents are primarily published electronically and they are made available for free as pdf files through http://www.dnv.com. The electronic pdf versions of the documents found through the same site are the officially binding versions.

Readers of documents are encouraged to regularly check for updates in order to ensure that they hold the current updated versions.

Updating Scheme

These documents are published throughout the year except DNV Offshore Service Specifications and Offshore Standards which are normally published twice yearly, in April and in October, due to updates.

If a document has been updated, the document will normally be given a new edition date.

The corresponding Adobe PDF file will be made available through http://www.dnv.com and the date of the column "A" of Table 1 in Sec.2 will be updated.

If there is a need for amendments to the document; i.e. editorial and clarification corrections only, the electronic file will be updated, but the edition date will be retained. However, a new Adobe PDF file will be generated and made available through http://www.dnv.com. The date of the PDF file will appear in column "B" of Table 1 in Sec.2.

The updates including amendments to each chapter will be described briefly on page 3 of that document.

SECTION 2
CURRENT SERVICE SPECIFICATIONS, STANDARDS AND RECOMMENDED PRACTICES

Table 1 Current Documents

Documents		A Current Edition	B Amendments; i.e. editorial corrections and clarifications only
Service Specifications			
DNV-DSS-314	Verification of Hydrocarbon Refining and Petrochemical Facilities	October 2010	October 2011
DNV-DSS-315	Verification of Onshore LNG and Gas Facilities	October 2010	October 2011
DNV-DSS-904	Type Certification of Wind Turbines	January 2012	–
Offshore Service Specifications			
DNV-OSS-101	Rules for Classification of Offshore Drilling and Support Units	October 2011	–
DNV-OSS-102	Rules for Classification of Floating Production, Storage and Loading Units	October 2011	–
DNV-OSS-103	Rules for Classification of LNG/LPG Floating Production and Storage Units or Installations	June 2011	October 2011
DNV-OSS-121	Classification based on Performance Criteria Determined from Risk Assessment Methodology	October 2008	October 2011
DNV-OSS-201	Verification for Compliance with Norwegian Shelf Legislation	April 2010	October 2011
DNV-OSS-202	Verification for Compliance with UK Shelf Regulations	April 2011	October 2011
DNV-OSS-300	Risk Based Verification	April 2004	October 2011
DNV-OSS-301	Certification and Verification of Pipelines	October 2000	October 2011
DNV-OSS-302	Offshore Riser Systems	October 2010	October 2011
DNV-OSS-304	Risk Based Verification of Offshore Structures	October 2006	October 2011
DNV-OSS-305	Rules for Certification and Verification of Diving Systems	October 2010	October 2011
DNV-OSS-306	Verification of Subsea Facilities	June 2004	October 2011
DNV-OSS-307	Verification of Process Facilities	June 2004	October 2011
DNV-OSS-308	Verification of Lifting Appliances for the Oil and Gas Industry	October 2010	October 2011
DNV-OSS-312	Certification of Tidal and Wave Energy Converters	October 2008	October 2011
DNV-OSS-313	Pipe Mill and Coating Yard - Qualification	April 2009	October 2011
DNV-OSS-401	Technology Qualification Management	October 2010	October 2011
Standards			
DNV-DS-J102	Design and Manufacture of Wind Turbine Blades, Offshore and Onshore Wind Turbines	October 2010	November 2010
Offshore Standards			
DNV-OS-A101	Safety Principles and Arrangement	April 2011	–
DNV-OS-B101	Metallic Materials	April 2009	–
DNV-OS-C101	Design of Offshore Steel Structures, General (LRFD method)	April 2011	–
DNV-OS-C102	Structural Design of Offshore Ships	October 2011	–
DNV-OS-C103	Structural Design of Column Stabilised Units (LRFD method)	October 2008	October 2009
DNV-OS-C104	Structural Design of Self-elevating Units (LRFD method)	October 2008	April 2009
DNV-OS-C105	Structural Design of TLPs (LRFD method)	April 2011	–
DNV-OS-C106	Structural Design of Deep Draught Floating Units/Spars (LRFD and WSD Method)	October 2008	October 2009
DNV-OS-C201	Structural Design of Offshore Units (WSD method)	April 2011	-
DNV-OS-C301	Stability and Watertight Integrity	April 2011	–
DNV-OS-C401	Fabrication and Testing of Offshore Structures	October 2010	–
DNV-OS-C501	Composite Components	October 2010	–
DNV-OS-C502	Offshore Concrete Structures	October 2010	–
DNV-OS-C503	Concrete LNG Terminal Structures and Containment Systems	October 2010	–

Table 1 Current Documents (Continued)

Documents		A Current Edition	B Amendments; i.e. editorial corrections and clarifications only
DNV-OS-D101	Marine and Machinery Systems and Equipment	October 2011	–
DNV-OS-D201	Electrical Installations	April 2011	–
DNV-OS-D202	Automation, Safety, and Telecommunication Systems	October 2008	–
DNV-OS-D203	Integrated Software-Dependent System (ISDS)	May 2011	June 2011
DNV-OS-D301	Fire Protection	October 2008	October 2009
DNV-OS-E101	Drilling Plant	October 2009	–
DNV-OS-E201	Oil and Gas Processing Systems	October 2010	–
DNV-OS-E301	Position Mooring	October 2010	–
DNV-OS-E302	Offshore Mooring Chain	October 2008	October 2009
DNV-OS-E303	Offshore Mooring Fibre Ropes	October 2010	–
DNV-OS-E304	Offshore Mooring Steel Wire Ropes	April 2009	October 2009
DNV-OS-E401	Helicopter Decks	April 2011	–
DNV-OS-E402	Offshore Standard for Diving Systems	October 2010	–
DNV-OS-E403	Offshore Loading Buoys	October 2008	–
DNV-OS-E406	Design of Free Fall Lifeboats	April 2010	–
DNV-OS-F101	Submarine Pipeline Systems	October 2010	–
DNV-OS-F201	Dynamic Risers	October 2010	–
DNV-OS-H101	Marine Operations, General	October 2011	–
DNV-OS-H102	Marine Operations, Design and Fabrication	January 2012	–
DNV-OS-H203	Transit and Positioning of Offshore Units	February 2012	–
DNV-OS-J101	Design of Offshore Wind Turbine Structures	September 2011	October 2011
DNV-OS-J201	Offshore Substations for Wind Farms	October 2009	–
DNV-OS-J301	Standard for Classification of Wind Turbine Installation Units	April 2011	–
Recommended Practices			
DNV-RP-A201	Plan Approval Documentation Types – Definitions	January 2012	–
DNV-RP-A203	Qualification of New Technology	July 2011	–
DNV-RP-A204	Quality Survey Plan (QSP) for Offshore Class New-building Surveys	September 2011	–
DNV-RP-B101	Corrosion Protection of Floating Production and Storage Units	April 2007	–
DNV-RP-B401	Cathodic Protection Design	October 2010	April 2011
DNV-RP-C101	Allowable Thickness Diminution for Hull Structure of Offshore Ships	April 2007	–
DNV-RP-C102	Structural Design of Offshore Ships	February 2002	–
DNV-RP-C103	Column Stabilised Units	October 2010	–
DNV-RP-C104	Self-elevating Units	January 2012	-
DNV-RP-C201	Buckling Strength of Plated Structures	October 2010	–
DNV-RP-C202	Buckling Strength of Shells	October 2010	–
DNV-RP-C203	Fatigue Design of Offshore Steel Structures	October 2011	–
DNV-RP-C204	Design against Accidental Loads	October 2010	–
DNV-RP-C205	Environmental Conditions and Environmental Loads	October 2010	–
DNV-RP-C206	Fatigue Methodology of Offshore Ships	October 2010	–
DNV-RP-C207	Statistical Representation of Soil Data	January 2012	–
DNV-RP-D101	Structural Analysis of Piping Systems	October 2008	–
DNV-RP-D102	Failure Mode and Effect Analysis (FMEA) of Redundant Systems	January 2012	
DNV-RP-D201	Integrated Software Dependent Systems	October 2009	–
DNV-RP-E101	Recertification of Well Control Equipment for the Norwegian Continental Shelf	January 2012	–
DNV-RP-E102	Recertification of Blowout Preventers and Well Control Equipment for the US Outer Continental Shelf	June 2010	–
DNV-RP-E301	Design and Installation of Fluke Anchors in Clay	May 2000	–

Table 1 Current Documents (Continued)

Documents		A Current Edition	B Amendments; i.e. editorial corrections and clarifications only
DNV-RP-E302	Design And Installation of Plate Anchors in Clay	December 2002	–
DNV-RP-E303	Geotechnical Design and Installation of Suction Anchors in Clay	October 2005	–
DNV-RP-E304	Damage Assessment of Fibre Ropes for Offshore Mooring	April 2005	–
DNV-RP-E307	Dynamic Positioning Systems - Operation Guidance	January 2011	–
DNV-RP-E401	Survey of Diving Systems	April 2007	–
DNV-RP-E402	Naval Rescue Submersibles	October 2010	–
DNV-RP-E403	Hyperbaric Evacuation Systems	October 2010	–
DNV-RP-F101	Corroded Pipelines	October 2010	–
DNV-RP-F102	Pipeline Field Joint Coating and Field Repair of Linepipe Coating	May 2011	–
DNV-RP-F103	Cathodic Protection of Submarine Pipelines by Galvanic Anodes	October 2010	–
DNV-RP-F105	Free Spanning Pipelines	February 2006	–
DNV-RP-F106	Factory Applied External Pipeline Coatings for Corrosion Control	May 2011	–
DNV-RP-F107	Risk Assessment of Pipeline Protection	October 2010	–
DNV-RP-F108	Fracture Control for Pipeline Installation Methods Introducing Cyclic Plastic Strain	January 2006	–
DNV-RP-F109	On-Bottom Stability Design of Submarine Pipelines	October 2010	November 2011
DNV-RP-F110	Global Buckling of Submarine Pipelines Structural Design due to High Temperature/High Pressure	October 2007	–
DNV-RP-F111	Interference Between Trawl Gear and Pipelines	October 2010	–
DNV-RP-F112	Design of Duplex Stainless Steel Subsea Equipment Exposed to Cathodic Protection	October 2008	–
DNV-RP-F113	Pipeline Subsea Repair	October 2007	–
DNV-RP-F116	Integrity Management of Submarine Pipeline Systems	October 2009	–
DNV-RP-F118	Pipe Girth Weld Aut System Qualification and Project Specific Procedure Validation	October 2010	–
DNV-RP-F201	Design of Titanium Risers	October 2002	–
DNV-RP-F202	Composite Risers	October 2010	–
DNV-RP-F203	Riser Interference	April 2009	–
DNV-RP-F204	Riser Fatigue	October 2010	–
DNV-RP-F205	Global Performance Analysis of Deepwater Floating Structures	October 2010	–
DNV-RP-F206	Riser Integrity Management	April 2008	–
DNV-RP-F301	Subsea Separator Structural Design	April 2007	–
DNV-RP-F302	Selection and Use of Subsea Leak Detection Systems	April 2010	–
DNV-RP-F401	Electrical Power Cables in Subsea Applications	February 2012	–
DNV-RP-G101	Risk Based Inspection of Offshore Topsides Static Mechanical Equipment	October 2010	–
DNV-RP-G103	Non-intrusive Inspection	January 2011	–
DNV-RP-H101	Risk Management in Marine and Subsea Operations	January 2003	–
DNV-RP-H102	Marine operations during Removal of Offshore Installations	April 2004	–
DNV-RP-H103	Modelling and Analysis of Marine Operations	April 2011	–
DNV-RP-H104	Ballast, Stability, and Watertight Integrity - Planning and Operating Guidance	September 2011	–
DNV-RP-J101	Use of Remote Sensing for Wind Energy Assessments	April 2011	November 2011
DNV-RP-J201	Qualification Procedures for CO_2 Capture Technology	April 2010	–
DNV-RP-J202	Design and Operation of CO_2 Pipelines	April 2010	–
DNV-RP-O401	Safety and Reliability of Subsea Systems	April 1985	–
DNV-RP-O501	Erosive Wear in Piping Systems	2005	November 2007

SECTION 3
SUMMARY OF CHANGES

A. Changes to DNV Service Specifications

DNV Offshore Service Specifications – Main changes		
Document number	*Document title*	*Main changes*
DNV-DSS-904 January 2012	Type Certification of Wind Turbines	This new Service Specification replaces the DNV document "Type Certification of Wind Turbines, Certification Description", January 2011, Rev. 12, issued by Det Norske Veritas, Danmark A/S.

B. Changes to DNV Standards

DNV Standards – Main changes		
Document number	*Document title*	*Main changes*
DNV-OS-H102 January 2012	Marine Operations, Design and Fabrication	This is a new document in a series of documents replacing "Rules for Planning and Execution of Marine Operations" (1996/2000). This Standard replaces Pt.1 Ch.3 Sec.3 and Pt.1 Ch.4 (all sections) in the referred Rules.
DNV-OS-H203 February 2012	Transit and Positioning of Offshore Units	This is a new document in a series of documents replacing "Rules for Planning and Execution of Marine Operations" (1996/2000). This Standard replaces Pt.2 Ch.7 in the referred Rules. Nearly all parts of the text has been considerably updated with the following main changes: — "Section 4 - Positioning" in the Rules has been split in 3 sections, i.e. Anchored Units, DP Units and Self-elevating Units. — The requirements to DP units covered in (the new) section 6 are extensively elaborated.

C. Changes to Recommended Practices

DNV Recommended Practices – Main changes		
Document number	*Document title*	*Main changes*
DNV-RP-A201 January 2012	Plan Approval Documentation Types – Definitions	**Sec.1 General** — In Table 1-2, discipline V and unused disciplines A, F, J, U and Y have been deleted. **Sec.2 Documentation Types** — Discipline E: Some editorial changes and clarifications have been made. In addition: — E010: Frequency converters and filters are added to listed objects — E060 is deleted and merged with E040. Calculation of discharge characteristics for batteries has been added for some systems. — E070 is deleted since it is not used — E080: Removed specific list of components to be included in discrimination analysis — E130: Documentation requirements for semiconductor assemblies is modified — E150, E160 and E210: Specification of applicable systems removed — E220: Electrical system philosophy is modified — New "E240 – Electrical assembly functional description" has been added. — Removal of sub-sections related to unused disciplines — Changing of Documentation types related to Loading Computers as follows: — H160 substituted with new I270 — H170 substituted with new I280. — Changing of Documentation types related to former Discipline V as follows: — V010 substituted with new S012 — V011 substituted with new S013 — V020 deleted, now covered by S020 — V030 deleted, now covered by S030 — V040 deleted, now covered by S040 — V050 substituted with new S061 — V060 substituted with new G061 — V070 deleted. — A new Z072 has been added in connection with the introduction of Rules for Classification of Ships Pt.6 Ch.28 Tentative Rules for Battery Power. — A new "Z330 – Cargo list" has been added.
DNV-RP-C104 January 2012	Self-elevating Units	**General** This edition of the document contains only minor corrections and clarifications. **Sec.2. Environmental Conditions** — Formula for wind velocity v(t,z) has been corrected.
DNV-RP-C207 January 2012	Statistical Representation of Soil Data	— The expression for $\hat{a}_0$ in 2.4.2.2 has been amended.
DNV-RP-D102 January 2012	Failure Mode and Effect Analysis (FMEA) of Redundant Systems	— This is a new document.
DNV-RP-E101 January 2012	Recertification of Well Control Equipment for the Norwegian Continental Shelf	— This document has undergone a process to improve and clarify aspects related to a recertification. — Reference Standards have been implemented as a separate section 2, and are divided into normative and informative standards.
DNV-RP-F401 February 2012	Electrical Power Cables in Subsea Applications	— This is a new document.