

OFFSHORE STANDARD
DNV-OS-E401

HELICOPTER DECKS

OCTOBER 2008

DET NORSKE VERITAS

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 Offshore Codes consist of a three level hierarchy of documents:

- *Offshore Service Specifications*. Provide principles and procedures of DNV classification, certification, verification and consultancy services.
- *Offshore Standards*. Provide technical provisions and acceptance criteria for general use by the offshore industry as well as the technical basis for DNV offshore services.
- *Recommended Practices*. Provide proven technology and sound engineering practice as well as guidance for the higher level Offshore Service Specifications and Offshore Standards.

DNV Offshore Codes 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) Wind Turbines
- O) Subsea Systems

Amendments and Corrections

Whenever amendments and corrections to the document are necessary, the electronic file will be updated and a new Adobe PDF file will be generated and made available from the Webshop (<http://webshop.dnv.com/global/>).

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CHANGES

- **General**

Being class related, this document is published electronically only (as of October 2008) and a printed version is no longer available. The update scheme for this category of documents is different compared to the one relevant for other offshore documents (for which printed versions are available).

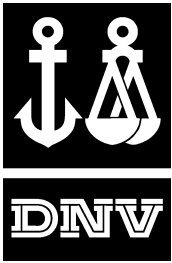
For an overview of all types of DNV offshore documents and their update status, see the “Amendments and Corrections” document located at: <http://webshop.dnv.com/global/>, under category “Offshore Codes”.

- **Main changes**

Since the previous edition (Mars 2001), this document has been amended, latest in April 2007. All changes have been incorporated.

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CHAPTER 1

INTRODUCTION

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Documents

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SECTION 1 INTRODUCTION

A. General

A 100 General

101 This standard is intended to provide requirements and guidance to the design of helicopter decks constructed in steel or aluminium for any unit or installation intended for offshore use.

102 The requirements in this standard apply to units or installations with erected landing platform for helicopters or a landing area arranged directly on weather deck or supported by substructure anywhere on the unit or installation.

103 The standard is applicable to the design of complete helicopter deck structures including sub-structure and hull connections and reinforcements.

104 The standard has been written for general worldwide application. Governmental regulations may include requirements in excess of the provisions of this standard depending on the size, type, location and intended service of the offshore unit or installation.

A 200 Objectives

201 The objectives of this standard are to:

- provide an internationally acceptable standard of safety for helicopter decks by defining minimum requirements for the design, materials, construction and commissioning
- serve as a contractual reference document
- serve as a guideline for designers, suppliers, purchasers, contractors and regulators
- specify procedures and requirements for helicopter decks subject to DNV certification and classification.

A 300 Organisation of this standard

301 This standard is divided into three main chapters:

Chapter 1: General information, scope, definitions and references.

Chapter 2: Technical provisions for helicopter decks for general application.

Chapter 3: Specific procedures and requirements applicable for certification and classification in accordance with this standard.

B. Normative References

B 100 General

101 The standards given in Table B1, Table B2 and Table B3 include provisions, which through reference in this text constitute provisions for this standard.

B 200 Offshore service specifications and rules

201 The offshore service specifications and rules given in Table B1 are referred to in this standard.

Table B1 DNV Offshore service specifications and rules	
Reference	Title
DNV-OSS-101	Rules for Classification of Offshore Drilling and Support Units
DNV-OSS-102	Rules for Classification of Floating Production, Storage and Loading Units
	Rules for Classification of Ships

B 300 Offshore standards

301 The offshore standards given in Table B2 are referred to in this standard.

Table B2 DNV Offshore standards	
Reference	Title
DNV-OS-B101	Metallic Materials
DNV-OS-C101	Design of Offshore Steel Structures, General (LRFD method)
DNV-OS-C102	Structural Design of Offshore Ships
DNV-OS-C103	Structural Design of Column Stabilised Units (LRFD method)
DNV-OS-C104	Structural Design of Self Elevating Units (LRFD method)
DNV-OS-C105	Structural Design of TLPs (LRFD method)
DNV-OS-C106	Structural Design of Deep Draught Floating Units
DNV-OS-C201	Structural Design of Offshore Units (WSD method)
DNV-OS-D301	Fire Protection

B 400 Other references

401 The other references given in Table B3 are referred to in this standard.

Table B3 Other references	
Reference	Title
IMO Resolution A.855(20)	Standards for on-board Helicopter Facilities
IMO MODU Code, 1989	Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989

C. Informative References

C 100 General

101 The documents in Table C1 include acceptable methods for fulfilling the requirements in the standards. Other recognised documents may be used provided it is shown that they meet or exceed the level of safety of the actual standards.

Table C1 DNV Recommended Practices, Classification Notes and Guidelines	
Reference	Title
DNV-RP-C203	Fatigue Strength Analysis of Offshore Steel Structures
Classification Note 30.1	Buckling Strength Analysis
Classification Note 30.5	Environmental Conditions and Environmental Loads
Classification Note 30.7	Fatigue Assessment of Ship Structures
Guideline No. 17	Plan Approval Documentation Types – Definitions