



GUIDANCE NOTES ON

CONVERSION OF MOBILE OFFSHORE DRILLING UNITS TO FLOATING PRODUCTION INSTALLATIONS

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Foreword

Converting a mobile drilling unit to a production installation can be a cost effective approach for the development of offshore fields. The classification requirements of the existing drilling unit are to be changed to those for a site-specific floating offshore installation. The design of conversion is based on the site-specific conditions for the site where the unit is to be installed and operated through the intended period of operation.

These Guidance Notes are intended to provide information on the items that need to be considered for the conversion, and give specific criteria that should be applied for classification in accordance with the ABS Rules and Guides. Two types of conversions are covered in these Guidance Notes: column-stabilized drilling units to column-stabilized production installations, and drillships to ship-type floating production installations. It is not the intention of these Guidance Notes to alter the technical criteria of the ABS Rules and Guides referenced herein. The main focus of these Guidance Notes is to aid in the application of these criteria to the converted installations.

The Guidance Notes contained herein should be used in conjunction with the *ABS Rules for Building and Classing Floating Production Installations* and the *ABS Rules for Building and Classing Mobile Offshore Drilling Units*.

These Guidance Notes become effective on the first day of the month of publication.

Users are advised to check periodically on the ABS website www.eagle.org to verify that this version of these Guidance Notes is the most current.

We welcome your feedback. Comments or suggestions can be sent electronically by email to rsd@eagle.org.

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CHAPTER 1 Introduction

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CHAPTER 1 Introduction

SECTION 1 General

Converting a mobile drilling unit to a production installation can be a cost effective approach for the development of offshore fields. Two of these types of conversions are covered in these Guidance Notes: column-stabilized drilling units (CSDUs) to column-stabilized production installations, and drillships to ship-type floating production installations (FPIs). The classification requirements involve changing an existing mobile drilling unit to a site specific floating offshore installation. The requirements for the converted unit are based on the site-specific conditions for the operating site where the unit is to be installed and operated through the intended period of operation, and the transit conditions. These Guidance Notes are intended to provide information on the items that need to be considered resulting from the conversion, and give specific criteria that should be applied for classification in accordance with the ABS Rules and Guides. The Guidance Notes are to be used in conjunction with the *ABS Rules for Building and Classing Floating Production Installations (FPI Rules)* and other applicable ABS Rules and Guides.

Chapter 2 provides the requirements for conversion of column-stabilized drilling units to column-stabilized production installations, and Chapter 3 provides the requirements for conversion of drillships to ship-type floating offshore installations.

It is not the intention of these Guidance Notes to alter the technical criteria of the ABS Rules and Guides referenced herein. The main focus of these Guidance Notes is to aid in the application of these criteria in the conversion process.



CHAPTER 1 Introduction

SECTION 2 Application of Referenced Rules

The application of referenced Rules in these Guidance Notes is based on the contract date for conversion between the shipbuilder and the prospective Owner. See also 1-1-4/3 of the *ABS Rules for Conditions of Classification – Offshore Units and Structures (Part 1)*.

Structures other than hull structures (such as deckhouses), machinery equipment and/or marine systems which will remain unchanged will be considered on the basis of the original Rules used for the construction as well as the safety features of the converted unit.



CHAPTER 1 Introduction

SECTION 3 Abbreviations

ABS	American Bureau of Shipping
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
AISC	American Institute of Steel Construction
CSDU	Column-Stabilized Drilling Unit
DEC	Design Environmental Condition
DISEC	Disconnectable Environmental Condition
DOC	Design Operating Condition
FEA	Finite Element Analysis
FOI	Floating Offshore Installation
FPS	Floating Production (and Offloading) System
FPSO	Floating Production, Storage, and Offloading System
FPI	Floating Production Installation
FSO	Floating Storage and Offloading System
GM	Metacentric Height
GOM	Gulf of Mexico
ISIP	In-Service Inspection Program
ISE	Initial Scantling Evaluation
LCG	Longitudinal Center of Gravity
LSA	IMO Code for Life Saving Appliances (such as lifeboat, life jackets, etc.)
MARPOL	International Convention for the Prevention of Pollution from Ships (Marine Pollution)
MODU	Mobile Offshore Drilling Unit
NACE	National Association of Corrosion Engineers
OCS	Outer Continental Shelf
OHCM	Offshore Hull Construction Monitoring
POB	Person on Board
SOLAS	International Convention for the Safety of Life at Sea
SFP	Structural Fire Protection
SPM	Single Point Mooring
SWBM	Still Water Bending Moment
SWSF	Still Water Shearing Force

TSA	Total Strength Assessment
TCG	Transverse Center of Gravity
VCG	Vertical Center of Gravity



CHAPTER 2 Conversion of Column-Stabilized Drilling Units to Column-Stabilized Installations

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CHAPTER 2 Conversion of Column-Stabilized Drilling Units to Column-Stabilized Installations

SECTION 1 Introduction

1 Overview

This chapter provides guidance for the conversion of CSDUs to column-stabilized production installations and addresses three major items: the installation, the position mooring system, and as applicable the production facilities if they are requested to be classed. Sections 2 and 3 of the chapter addresses the items that may be considered for the conversion and specific criteria that should be applied for classification in accordance with the ABS Rules and Guides.

3 Classification Notations

3.1 Class Symbols and Notations

For a column-stabilized installation that is converted from a CSDU, the class symbols and notations are to be as indicated in 1-1-2/3.1, 1-1-2/3.3 and 1-1-2/3.5 of the *FPI Rules* as applicable. The class notation to be assigned depends on whether production and offloading systems are added, and whether storage capability is available for the converted unit.

3.3 Additional Notations

Additional notations can be assigned in accordance with 1-1-2/5 of the *FPI Rules*. For automatic or remote control and monitoring systems, class notations can be assigned in accordance with 1-1-2/9 of the *FPI Rules*.

5 Documentation

The Owner or Designer is required to submit all applicable design documentation, such as reports, calculations, plans and other documentation necessary to verify the structural strength of the column-stabilized installation itself and adequacy of the mooring system, production and other utility and riser system (if included in the classification) for the intended operations to ABS for review. The submitted design documentation is to be in accordance with Section 1-1-4 of the *FPI Rules*, and include the design environmental conditions (see Section 3-2-4 of the *FPI Rules*).