



NSAI
Standards

Standard Recommendation
S.R. CEN ISO/TR 13624-2:2013

Petroleum and natural gas industries - Drilling and production equipment - Part 2: Deepwater drilling riser methodologies, operations, and integrity technical report (ISO/TR 13624-2:2009)

S.R. CEN ISO/TR 13624-2:2013

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:

This document is based on:
CEN ISO/TR 13624-2:2013

Published:
11 October, 2013

This document was published
under the authority of the NSAI
and comes into effect on:
11 October, 2013

ICS number:
75.180.10

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

ICS 75.180.10

English Version

Petroleum and natural gas industries - Drilling and production equipment - Part 2: Deepwater drilling riser methodologies, operations, and integrity technical report (ISO/TR 13624-2:2009)

Industries du pétrole et du gaz naturel - Équipement de forage et de production - Partie 2: Méthodologies, opérations et rapport technique d'intégrité relatifs aux tubes prolongateurs pour forages en eaux profondes (ISO/TR 13624-2:2009)

Erdöl- und Erdgasindustrie - Bohr- und Förderanlagen - Teil 2: Riser für die Tiefsee, Methodik, Betrieb und technische Dokumentation (ISO/TR 13624-2:2009)

This Technical Report was approved by CEN on 24 September 2013. It has been drawn up by the Technical Committee CEN/TC 12.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	3
----------------------	----------

Foreword

The text of ISO/TR 13624-2:2009 has been prepared by Technical Committee ISO/TC 67 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries” of the International Organization for Standardization (ISO) and has been taken over as CEN ISO/TR 13624-2:2013 by Technical Committee CEN/TC 12 “Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries” the secretariat of which is held by AFNOR.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of ISO/TR 13624-2:2009 has been approved by CEN as CEN ISO/TR 13624-2:2013 without any modification.

This page is intentionally left BLANK.

TECHNICAL REPORT

**ISO/TR
13624-2**

First edition
2009-12-01

Petroleum and natural gas industries — Drilling and production equipment —

Part 2:

Deepwater drilling riser methodologies, operations, and integrity technical report

*Industries du pétrole et du gaz naturel — Équipement de forage et de
production —*

*Partie 2: Méthodologies, opérations et rapport technique d'intégrité
relatifs aux tubes prolongateurs pour forages en eaux profondes*



Reference number
ISO/TR 13624-2:2009(E)

© ISO 2009

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2009

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction.....	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Abbreviated terms	7
5 Coupled drilling riser/conductor analysis methodology and worked example	7
5.1 Coupled methodology.....	7
5.2 Decoupled methodology.....	7
5.3 Analysis considerations	10
5.4 Model development	10
5.5 Coupled riser analysis	19
5.6 Decoupled riser analysis	21
5.7 Worked example	22
5.8 Basis of analysis	22
5.9 Model description and analysis procedure	29
5.10 Results.....	30
6 Drift-off/drive-off analysis methodology and worked example	33
6.1 Drift-off analysis methodology	33
6.2 Example	36
7 Recoil analysis methodology and worked example	50
7.1 Introduction.....	50
7.2 Background.....	50
7.3 Required information	57
7.4 Performance criteria.....	64
7.5 Worked example applicability	68
Bibliography.....	88

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 13624-2 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 4, *Drilling and production equipment*.

ISO/TR 13624 consists of the following parts, under the general title *Petroleum and natural gas industries — Drilling and production equipment*:

- *Part 1: Design and operation of marine drilling riser equipment*
- *Part 2: Deepwater drilling riser methodologies, operations, and integrity technical report*

Introduction

Since API RP 16Q was issued in 1993, hydrocarbon exploration in 1 200+ m (4 000+ ft) water depths has increased significantly. As a consequence, the need was identified to update that code of practice to address the issues particular to deepwater operations.

Under the auspices of the DeepStar programme, substantial work was commissioned during 1999 and 2000 by the DeepStar Drilling Committee 4502 and led to the development of *Deepwater Drilling Riser Methodologies, Operations, and Integrity Guidelines* in February 2001. Several contractors participated in these efforts. These guidelines were intended to supplement and update the existing API RP 16Q:1993 for deepwater application. In a subsequent joint industry project and in collaboration with DeepStar and the API, these guidelines were later supplemented with other identified revisions and technically edited by an API task group to produce the revision of API RP 16Q:1993 as ISO 13624-1 and the API Technical Report TR1.

This Technical Report is a supplement to the revised API RP 16Q and provides guidance on various analysis methodologies and operating practices.

NOTE The figures have been reproduced as provided by the Technical Committee and, in some cases, contain only USC units.

Petroleum and natural gas industries — Drilling and production equipment —

Part 2: Deepwater drilling riser methodologies, operations, and integrity technical report

1 Scope

This part of ISO 13624 pertains to mobile offshore drilling units that employ a subsea BOP stack deployed at the seafloor. It is intended that the drilling riser analysis methodologies discussed in this part of ISO 13624 be used and interpreted in the context of ISO 13624-1.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13624-1:2009, *Petroleum and natural gas industries — Drilling and production equipment — Part 1: Design and operation of marine drilling riser equipment*

API RP 16Q:1993, *Design, Selection, Operation and Maintenance of Marine Drilling Riser Systems*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

accumulator

⟨BOP⟩ pressure vessel charged with gas (e.g. nitrogen) over liquid and used to store hydraulic fluid under pressure for operation of blowout preventers

3.2

accumulator

riser tensioner

pressure vessel charged with gas (e.g. nitrogen) over liquid that is pressurized on the gas side from the tensioner high-pressure gas supply bottles and supplies high-pressure hydraulic fluid to energize the riser tensioner cylinder

3.3

air-can buoyancy

tension applied to the riser string by the net buoyancy of an air chamber created by a closed-top, open-bottom cylinder forming an air-filled annulus around the outside of the riser pipe

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-