

Irish Standard I.S. EN ISO 14723:2009

Petroleum and natural gas industries -Pipeline transportation systems -Subsea pipeline valves (ISO 14723:2009)

© NSAI 2009

No copying without NSAI permission except as permitted by copyright law.

Incorporating amendments/corrigenda issued since publication:

This document replaces: I.S. EN ISO 14723:2002

This document is based on: EN ISO 14723:2009 EN ISO 14723:2001 Published: 15 June, 2009 25 January, 2002

This document was published under the authority of the NSAI and comes into effect on: 19 August, 2009

ICS number: 75.200

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 Price Code:

Údarás um Chaighdeáin Náisiúnta na hÉireann

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 14723

June 2009

ICS 75.200

Supersedes EN ISO 14723:2001

English Version

Petroleum and natural gas industries - Pipeline transportation systems - Subsea pipeline valves (ISO 14723:2009)

Industries du pétrole et du gaz naturel - Systèmes de transport par conduites - Vannes de conduites immergées (ISO 14723:2009)

Erdöl- und Erdgasindustrie - Rohrleitungstransportsysteme - Unterwasserarmaturen (ISO 14723:2009)

This European Standard was approved by CEN on 20 May 2009.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

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



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

EN ISO 14723:2009 (E)

| Contents | Page |
|----------|------|
| | |
| Foreword | 3 |

EN ISO 14723:2009 (E)

Foreword

This document (EN ISO 14723:2009) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries" in collaboration with 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.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2009, and conflicting national standards shall be withdrawn at the latest by December 2009.

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.

This document supersedes EN ISO 14723:2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 14723:2009 has been approved by CEN as a EN ISO 14723:2009 without any modification.

This is a free page sample. Access the full version online.

I.S. EN ISO 14723:2009

This page is intentionally left BLANK.

This is a free page sample. Access the full version online.

I.S. EN ISO 14723:2009
INTERNATIONAL
STANDARD

ISO 14723

Second edition 2009-06-15

Petroleum and natural gas industries — Pipeline transportation systems — Subsea pipeline valves

Industries du pétrole et du gaz naturel — Systèmes de transport par conduites — Vannes de conduites immergées



ISO 14723:2009(E)

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

| Forewo | Forewordv | | | | |
|-------------------------------|--|----------------|--|--|--|
| Introdu | uction | v | | | |
| 1 | Scope | . 1 | | | |
| 2 2.1 2.2 | ConformanceRoundingCompliance to standard | . 1 | | | |
| 3 | Normative references | . 1 | | | |
| 4 | Terms and definitions | . 3 | | | |
| 5 5.1 5.2 | Symbols and abbreviated terms | . 8 | | | |
| 6 6.1 6.2 | Valve types and configurations Valve types Valve configurations | . 9 | | | |
| 7 7.1 7.2 | Design Design codes and calculations Pressure and temperature ratings | 25 | | | |
| 7.3 7.4 7.5 | Cavity relief External pressure and loads Sizes | 26 26 | | | |
| 7.6 7.7 7.8 | Face-to-face and end-to-end dimensions Valve operation Pigging | 26 36 | | | |
| 7.9 7.10 7.11 | Valve ends | 37 38 | | | |
| 7.12 7.13 | Locking devices Position of the obturator | 39 39 | | | |
| 7.14 7.15 7.16 | Position indicators Travel stops ROV interface | 39 39 | | | |
| 7.17 7.18 7.19 | Sealant injection Lifting points and supports Valve operator interface | 40 | | | |
| 7.20 7.21 7.22 | Drive trains | 41 | | | |
| 7.23 7.24 7.25 | Hydraulic lock | 42 42 | | | |
| 7.26 7.27 | Design document review | 42 42 | | | |
| 8 8.1 8.2 8.3 8.4 | Materials Material specification Service compatibility Forged parts Composition limits | 42 43 43 | | | |
| 8.5 | Impact test requirements of steels | | | | |

ISO 14723:2009(E)

| 8.6 | Bolting | - |
|--------------|--|----|
| 8.7 | Sour service | 45 |
| 9 | Welding | 45 |
| 9.1 | Qualifications | |
| 9.2 | Impact testing requirements of weldments | |
| 9.3 | Hardness testing | |
| 9.4 | Repair | 47 |
| 10 | Quality control | 48 |
| 10.1 | NDE requirements | |
| 10.2 | Measuring and test equipment | |
| 10.3 | Qualification of inspection and test personnel | |
| 10.4 10.5 | NDE | |
| 10.5 | Visual inspection of castings | |
| | | |
| 11 | Testing | |
| 11.1 11.2 | General | |
| 11.2 | Hydrostatic shell testOperational/functional test | |
| 11.4 | Hydrostatic seat test | |
| 11.5 | Cavity-relief test | |
| 11.6 | Low-pressure-gas seat test | |
| 11.7 | Draining | |
| 11.8 | Installation of body connections after testing | 53 |
| 12 | Coating | 53 |
| 13 | Marking | 53 |
| 14 | Preparation for shipment | 55 |
| 15 | Documentation | 55 |
| 15.1 | Documentation retained by manufacturer | |
| 15.2 | Documentation shipped with valve | 56 |
| Annex | A (normative) Requirements for non-destructive examination | 57 |
| Annex | B (normative) Supplementary test requirements | 60 |
| Annex | C (informative) Supplementary documentation requirements | 65 |
| Annex | CD (informative) Purchasing guidelines | 66 |
| Annex | c E (informative) Marking example | 71 |
| Bibliod | graphy | 72 |

ISO 14723:2009(E)

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.

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 14723 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 2, *Pipeline transportation systems*.

This second edition cancels and replaces the first edition (ISO 14723:2001), which has been technically revised.

ISO 14723:2009(E)

Introduction

This International Standard is based on ISO 14313. It has been developed to address special requirements specific to subsea pipeline valves.

It is necessary that users of this International Standard be aware that further or differing requirements can be required for individual applications. This International Standard is not intended to inhibit a contractor from offering, or the company from accepting, alternative engineering solutions for the individual application. This can be particularly applicable where there is innovative or developing technology. Where an alternative is offered, it is the responsibility of the manufacturer to identify any variations from this International Standard and provide details.

Petroleum and natural gas industries — Pipeline transportation systems — Subsea pipeline valves

1 Scope

This International Standard specifies requirements and gives recommendations for the design, manufacturing, testing and documentation of ball, check, gate and plug valves for subsea application in offshore pipeline systems meeting the requirements of ISO 13623 for the petroleum and natural gas industries.

This International Standard is not applicable to valves for pressure ratings exceeding PN 420 (Class 2500).

2 Conformance

2.1 Rounding

Except as otherwise required by this International Standard, to determine conformance with the specified requirements, observed or calculated values shall be rounded to the nearest unit in the last right-hand place of figures used in expressing the limiting value, in accordance with the rounding method of ISO 31-0:1992, Annex B, Rule A.

2.2 Compliance to standard

A quality system should be applied to assist compliance with the requirements of this International Standard.

NOTE ISO/TS 29001 gives sector-specific guidance on quality management systems.

The manufacturer shall be responsible for complying with all of the applicable requirements of this International Standard. It shall be permissible for the purchaser to make any investigation necessary in order to be assured of compliance by the manufacturer and to reject any material that does not comply.

3 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 7-1, Pipe threads where pressure-tight joints are made on the threads — Part 1: Dimensions, tolerances and designation

ISO 31-0:1992, Quantities and Units — Part 0: General Principles

ISO 148-1, Metallic materials — Charpy pendulum impact test — Part 1: Test method

ISO 228-1, Pipe threads where pressure-tight joints are not made on the threads — Part 1: Dimensions, tolerances and designation

ISO 5208:2008, Industrial valves — Pressure testing of metallic valves



| The is a new provider i arenade and chare publication at the limit below | This is a free preview. | Purchase the | entire publication | at the link below: |
|--|-------------------------|--------------|--------------------|--------------------|
|--|-------------------------|--------------|--------------------|--------------------|

Product Page

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