

This is a preview of "ISO 13680:2010". [Click here to purchase the full version from the ANSI store.](#)

Third edition
2010-09-01

Petroleum and natural gas industries — Corrosion-resistant alloy seamless tubes for use as casing, tubing and coupling stock — Technical delivery conditions

Industries du pétrole et du gaz naturel — Tubes sans soudure en acier allié résistant à la corrosion utilisés comme tubes de cuvelage, tubes de production et tubes-ébauches pour manchons — Conditions techniques de livraison



Reference number
ISO 13680:2010(E)

© ISO 2010

This is a preview of "ISO 13680:2010". [Click here to purchase the full version from the ANSI store.](#)

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 2010

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

This is a preview of "ISO 13680:2010". Click here to purchase the full version from the ANSI store.

Contents

Page

Foreword	v
Introduction.....	vi
1 Scope.....	1
2 Conformance	2
2.1 Dual normative references	2
2.2 Units of measurement.....	2
3 Normative references.....	2
4 Terms, abbreviated terms, symbols and definitions	4
4.1 Terms and definitions	4
4.2 Symbols.....	7
4.3 Abbreviated terms	7
5 Information to be supplied by the purchaser	8
6 Manufacturing process.....	9
6.1 Manufacturing of corrosion-resistant alloys	9
6.2 Product manufacturing process	9
6.3 Pipe end sizing	10
6.4 Straightening	10
6.5 Process requiring validation	10
6.6 Traceability.....	10
7 Material requirements	11
7.1 Chemical composition	11
7.2 Tensile properties.....	11
7.3 Hardness properties.....	11
7.4 Charpy V-notch test properties — General requirements.....	11
7.5 Charpy V-notch — Absorbed energy requirements for coupling stock — All grades.....	12
7.6 Charpy V-notch — Absorbed energy requirements for pipe — All grades	13
7.7 Flattening requirements.....	14
7.8 Corrosion properties.....	15
7.9 Microstructure properties.....	15
7.10 Surface condition	15
7.11 Defects.....	15
7.12 Hydrostatic test	16
8 Dimensions, masses and tolerances	16
8.1 Outside diameter, wall thickness and mass	16
8.2 Length.....	17
8.3 Tolerances.....	17
8.4 Product ends.....	17
9 Inspection and testing	17
9.1 Test equipment	17
9.2 Type and frequency of tests.....	18
9.3 Testing of chemical composition	18
9.4 Testing of mechanical characteristics	19
9.5 Tensile test	19
9.6 Hardness test.....	20
9.7 Impact or flattening test.....	20
9.8 Microstructural examination	23
9.9 Dimensional testing	23

This is a preview of "ISO 13680:2010". [Click here to purchase the full version from the ANSI store.](#)

9.10	Drift test	24
9.11	Length	24
9.12	Straightness	24
9.13	Mass determination	24
9.14	Hydrostatic test.....	25
9.15	Visual inspection	25
9.16	Non-destructive examination	26
10	Surface treatment	31
10.1	Group 1	31
10.2	Groups 2, 3 and 4.....	31
11	Marking	31
11.1	General.....	31
11.2	Marking on the product.....	32
11.3	Date of manufacture	33
12	Surface protection — Group 1.....	33
13	Documents	33
13.1	Electronic media	33
13.2	Retention of records.....	34
13.3	Test certificates.....	34
14	Handling, packaging and storage	35
14.1	General.....	35
14.2	Handling.....	35
14.3	Packaging	35
14.4	Storage.....	35
Annex A	(normative) Tables in SI units	36
Annex B	(normative) Figures in SI (USC) Units	56
Annex C	(normative) Tables in USC units	61
Annex D	(normative) Purchaser inspection	81
Annex E	(normative) Cleanliness requirements	82
Annex F	(informative) Use of the API Monogram by Licensees	84
Annex G	(normative) Product specification level 2 (PSL-2)	87
Bibliography	89

This is a preview of "ISO 13680:2010". [Click here to purchase the full version from the ANSI store.](#)

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 13680 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 5, *Casing, tubing and drill pipe*.

This third edition cancels and replaces the second edition (ISO 13680:2008), of which it constitutes a minor revision, with changes to 4.1.2; 4.1.14; 4.1.16; 4.1.19; 5.2 p) and 5.2 q); 6.1; 6.5; 6.6; 7.2; 7.7; 7.11.1 and 7.11.2; 9.3.3; 9.8.2; 9.8.3; 9.16.7; 9.16.13; 9.16.14; 11.2.4; 13.3; and Tables A.1, A.27, A.28, C.2, C.15, C.18, C.27 and C.28.

It is the intent of ISO/TC 67 that the second and third edition of ISO 13680 both be applicable, at the option of the purchaser, for a period of six months from the first day of the calendar quarter immediately following the date of publication of this third edition, after which period the second edition will no longer be applicable.

This is a preview of "ISO 13680:2010". [Click here to purchase the full version from the ANSI store.](#)

Introduction

It is necessary that users of this International Standard be aware that further or differing requirements can be needed for individual applications. This International Standard is not intended to inhibit a vendor from offering, or the purchaser from accepting, alternative equipment or 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 vendor to identify any variations from this International Standard and provide details.

This International Standard includes provisions of various nature. These are identified by the use of certain verbal forms:

SHALL is used to indicate that a provision is MANDATORY;

SHOULD is used to indicate that a provision is not mandatory, but RECOMMENDED as good practice;

MAY is used to indicate that a provision is OPTIONAL.