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BSI Standards Publication

Petroleum and natural gas industries — Materials for use in H₂S-containing environments in oil and gas production

Part 2: Cracking-resistant carbon and low alloy steels, and the use of cast irons (ISO 15156-2:2015)

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National foreword

This British Standard is the UK implementation of EN ISO 15156-2:2015. It supersedes BS EN ISO 15156-2:2009.

The UK participation in its preparation was entrusted to Technical Committee PSE/17, Materials and equipment for petroleum, petrochemical and natural gas industries.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**Petroleum and natural gas industries - Materials for use in
H₂S-containing environments in oil and gas production -
Part 2: Cracking-resistant carbon and low alloy steels, and
the use of cast irons (ISO 15156-2:2015)**

Industries du pétrole et du gaz naturel - Matériaux pour utilisation dans des environnements contenant de l'hydrogène sulfuré (H₂S) dans la production de pétrole et de gaz - Partie 2 : Aciers au carbone et aciers faiblement alliés résistants à la fissuration, et utilisation de fontes (ISO 15156-2:2015)

Erdöl- und Erdgasindustrie - Werkstoffe für den Einsatz in H₂S-haltiger Umgebung bei der Öl- und Gasgewinnung - Teil 2: Gegen Rissbildung beständige unlegierte und niedriglegierte Stähle und Gusseisen (ISO 15156-2:2015)

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

European foreword

This document (EN ISO 15156-2:2015) 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of an identical text or by endorsement, at the latest by March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

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 15156-2:2009.

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, 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 the United Kingdom.

Endorsement notice

The text of ISO 15156-2:2015 has been approved by CEN as EN ISO 15156-2:2015 without any modification.

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*.

This third edition cancels and replaces the second edition (ISO 15156-2:2009), of which it constitutes a minor revision, specifically by the following:

- replacement in the Scope of the term “conventional elastic design criteria” by the term “load controlled design methods”;
- inclusion in both [7.2.1.1](#) and [A.2.1.1](#) of information that emphasizes the possibilities for the qualification for a specific sour service or range of sour service of carbon and low alloy steels not listed in [Annex A](#);
- replacement of paragraph 6 of [A.2.1.4](#) to improve the guidance on the welding of carbon and low alloy steels not covered elsewhere in this subclause.

ISO 15156 consists of the following parts, under the general title *Petroleum and natural gas industries — Materials for use in H₂S-containing environments in oil and gas production*

- *Part 1: General principles for selection of cracking-resistant materials*
- *Part 2: Cracking-resistant carbon and low-alloy steels, and the use of cast irons*
- *Part 3: Cracking-resistant CRAs (corrosion-resistant alloys) and other alloys*