SLOVENSKI STANDARD
SIST EN ISO 10426-6:2008

01-september-2008

Industrija nafte in zemeljskega plina - Cementi in materiali za cementiranje vrtin - 6. del: Metode za določanje statične trdnosti gela cementnih mešanic (ISO 10426-6:2008)

Petroleum and natural gas industries - Cements and materials for well cementing - Part 6: Methods for determining the static gel strength of cement formulations (ISO 10426-6:2008)

Erdöl- und Erdgasindustrie - Zemente und Materialien für die Zementation von Tiefbohrungen - Teil 6: Verfahren zur Bestimmung der statischen Gelfestigkeit von Zementzusammensetzungen (ISO 10426-6:2008)

Industries du pétrole et du gas naturel - Ciments et matériaux pour la cimentation des puits - Partie 6: Méthodes de détermination de la force statique du gel des formulations de ciment (ISO 10426-6:2008)

Ta slovenski standard je istoveten z: EN ISO 10426-6:2008

ICS:

75.180.10	Oprema za raziskovanje in odkopavanje	Exploratory and extraction equipment
91.100.10	Cement. Mavec. Apno. Malta	Cement. Gypsum. Lime. Mortar

SIST EN ISO 10426-6:2008 en

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 10426-6

July 2008

ICS 91.100.10; 75.020

English Version

Petroleum and natural gas industries - Cements and materials for well cementing - Part 6: Methods for determining the static gel strength of cement formulations (ISO 10426-6:2008)

Industries du pétrole et du gas naturel - Ciments et matériaux pour la cimentation des puits - Partie 6: Méthodes de détermination de la force statique du gel des formulations de ciment (ISO 10426-6:2008)

Erdöl- und Erdgasindustrie - Zemente und Materialien für die Zementation von Tiefbohrungen - Teil 6: Verfahren zur Bestimmung der statischen Gelfestigkeit von Zementzusammensetzungen (ISO 10426-6:2008)

This European Standard was approved by CEN on 21 June 2008.

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: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN ISO 10426-6:2008: E

Contents

Page

Foreword

This document (EN ISO 10426-6:2008) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum and natural gas industries" in collaboration withTechnical 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 January 2009, and conflicting national standards shall be withdrawn at the latest by January 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.

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 10426-6:2008 has been approved by CEN as a EN ISO 10426-6:2008 without any modification.

INTERNATIONAL STANDARD

ISO 10426-6

First edition
2008-07-01

Petroleum and natural gas industries — Cements and materials for well cementing —

Part 6: Methods for determining the static gel strength of cement formulations

Industries du pétrole et du gaz naturel — Ciments et matériaux pour la cimentation des puits —

Partie 6: Méthodes de détermination de la force statique du gel des formulations de ciment

Reference number
ISO 10426-6:2008(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 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

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 10426-6 was prepared by Technical Committee ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries*, Subcommittee SC 3, *Drilling and completion fluids, and well cements*.

ISO 10426 consists of the following parts, under the general title *Petroleum and natural gas industries — Cements and materials for well cementing*:

— *Part 1: Specification*

— *Part 2: Testing of well cements*

— *Part 3: Testing of deepwater well cement formulations*

— *Part 4: Preparation and testing of foamed cement slurries at atmospheric pressure*

— *Part 5: Determination of shrinkage and expansion of well cement formulations at atmospheric pressure*

— *Part 6: Methods for determining the static gel strength of cement formulations*

Introduction

Characterizing the static gel-strength (SGS) development of a cement slurry is an important design parameter in specific cementing environments. These include shallow-water flow mitigation, plugging operations and certain annular flow circumstances. Determining the gel-strength characteristics of a cement slurry allows the user to ascertain if the cement design is fit for a particular intended purpose. Historically, the SGS of a cement slurry was determined by a method using a couette-type rotational viscometer. More recently, specialized instruments, including a rotating-type apparatus, an intermittent rotation-type apparatus and an ultrasonic-type apparatus, have been used to measure the gel-strength development of a static cement slurry. This part of ISO 10426 provides the testing protocol for determining SGS using these three types of instruments.

It is necessary to note due that, due to differences in sample size, apparatus configuration and method of SGS determination, there can be considerable variance in results obtained by the three types of instruments described in this part of ISO 10426.

CAUTION — Caution is necessary when using static gel-strength development testing results as the single or predominant engineering parameter of a cement slurry design or technical evaluation.

In this part of ISO 10426, where practical, U.S. Customary (USC) units are included in brackets for information. The units do not necessarily represent a direct conversion of SI to USC, or USC to SI, units. Consideration has been given to the precision of the instrument making the measurement. For example, thermometers are typically marked in one degree increments, thus temperature values have been rounded to the nearest degree.

In this part of ISO 10426, calibrating an instrument refers to ensuring the accuracy of the measurement. Accuracy is the degree of conformity of a quantity to its actual or true value. Accuracy is related to precision, or reproducibility of a measurement. Precision is the degree to which further measurements or calculations show the same or similar results. Precision is characterized in terms of the standard deviation of the measurement. The results of calculations or a measurement can be accurate but not precise, precise but not accurate, neither or both. A result is valid if it is both accurate and precise.

Annex A of this part of ISO 10426 is for information only.