

# **SLOVENSKI STANDARD**

## **SIST EN ISO 10427-2:2004**

**01-november-2004**

---

### **Petroleum and natural gas industries - Equipment for well cementing - Part 2: Centralizer placement and stop-collar testing (ISO 10427-2:2004)**

Petroleum and natural gas industries - Equipment for well cementing - Part 2: Centralizer placement and stop-collar testing (ISO 10427-2:2004)

Erdöl- und Erdgasindustrie - Zentrierungseinrichtungen für Futterrohre - Teil 2:  
Anordnung des Zentrierers und Prüfung des Anschlagbundes (ISO 10427-2:2004)

Industries du pétrole et du gaz naturel - Equipement de cimentation de puits - Partie 2:  
Mise en place des centreurs et essai des colliers d'arrêt (ISO 10427-2:2004)

[https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-](https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004)

[da8946e30489/sist-en-iso-10427-2-2004](https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004)

**Ta slovenski standard je istoveten z: EN ISO 10427-2:2004**

---

#### **ICS:**

75.180.10	Oprema za raziskovanje in odkopavanje	Exploratory and extraction equipment
-----------	--	---

**SIST EN ISO 10427-2:2004**

**en,fr,de**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 10427-2:2004

<https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004>

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN ISO 10427-2**

May 2004

ICS 75.180.10

English version

**Petroleum and natural gas industries - Equipment for well  
cementing - Part 2: Centralizer placement and stop-collar testing  
(ISO 10427-2:2004)**

Industries du pétrole et du gaz naturel - Equipement de  
cimentation de puits - Partie 2: Mise en place des centreurs  
et essai des colliers d'arrêt (ISO 10427-2:2004)

Erdöl- und Erdgasindustrie - Zentriereinrichtungen für  
Futterrohre - Teil 2: Anordnung des Zentrierers und Prüfung  
des Anschlagbundes (ISO 10427-2:2004)

This European Standard was approved by CEN on 16 April 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

<https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004>



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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

**EN ISO 10427-2:2004 (E)****Foreword**

This document (EN ISO 10427-2:2004) has been prepared by Technical Committee ISO/TC 67 "Materials, equipment and offshore structures for petroleum and natural gas industries" in collaboration with Technical Committee CEN/TC 12 "Materials, equipment and offshore structures for petroleum 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 November 2004, and conflicting national standards shall be withdrawn at the latest by November 2004.

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

**Endorsement notice**

The text of ISO 10427-2:2004 has been approved by CEN as EN ISO 10427-2:2004 without any modifications.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 10427-2:2004

<https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004>

# INTERNATIONAL STANDARD

**ISO**  
**10427-2**

First edition  
2004-05-01

---

---

## **Petroleum and natural gas industries — Equipment for well cementing —**

### **Part 2: Centralizer placement and stop-collar testing**

**iTeh STANDARD PREVIEW**

**(standards.iteh.ai)**

*Industries du pétrole et du gaz naturel — Équipement de cimentation  
de puits —*

*Partie 2: Mise en place des centreurs et essai des colliers d'arrêt*

[https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-  
da8946e30489/sist-en-iso-10427-2-2004](https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004)



Reference number  
ISO 10427-2:2004(E)

© ISO 2004

## ISO 10427-2:2004(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.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 10427-2:2004

<https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004>

© ISO 2004

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](mailto:copyright@iso.org)  
Web [www.iso.org](http://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 Methods for estimating centralizer placement .....	3
4.1 General .....	3
4.2 Standoff ratio calculation .....	4
4.3 Buoyed weight of casing .....	5
4.4 Calculations for centralizer spacing .....	6
5 Procedure for testing stop collars .....	9
5.1 General .....	9
5.2 Apparatus .....	10
5.3 Test procedure .....	11
5.4 Reporting of test results .....	11
Annex A (informative) Documentation of stop-collar test results .....	12
Bibliography .....	14

SIST EN ISO 10427-2:2004

<https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004>

## ISO 10427-2:2004(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 10427-2 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*.

This first edition of ISO 10427-2, together with ISO 10427-1 and ISO 10427-3, cancels and replaces ISO 10427:1993, which has been technically revised.

ISO 10427 consists of the following parts, under the general title *Petroleum and natural gas industries — Equipment for well cementing*:

- *Part 1: Casing bow-spring centralizers*
- *Part 2: Centralizer placement and stop-collar testing*
- *Part 3: Performance testing of cementing float equipment*

## Introduction

This part of ISO 10427 is based on API Specification 10D, 5th edition, January 1995<sup>[1]</sup>.

In this part of ISO 10427, where practical, U.S. Customary units are included in brackets for information.

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 10427-2:2004

<https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN ISO 10427-2:2004

<https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004>

# Petroleum and natural gas industries — Equipment for well cementing —

## Part 2: Centralizer placement and stop-collar testing

### 1 Scope

This part of ISO 10427 provides calculations for determining centralizer spacing, based on centralizer performance and desired standoff, in deviated and dogleg holes in wells for the petroleum and natural gas industries. It also provides a procedure for testing stop collars and reporting test results.

### 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 11960, *Petroleum and natural gas industries — Steel pipes for use as casing or tubing for wells*  
<https://standards.iteh.ai/catalog/standards/sist/831e5476-c080-4d54-93d3-da8946e30489/sist-en-iso-10427-2-2004>

### 3 Terms and definitions

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

#### 3.1

##### **annular clearance for perfectly centred casing**

wellbore diameter minus casing outside diameter divided by two

#### 3.2

##### **centralizer permanent set**

change in centralizer bow height after repeated flexing

NOTE A bow-spring centralizer is considered to have reached permanent set after being flexed 12 times.

#### 3.3

##### **flexed**

condition of a bow-spring when a force three times the specified minimum restoring force ( $\pm 5\%$ ) has been applied to it

[ISO 10427-1:2001, 3.1]

NOTE Specified minimum restoring force values are found in Table 1 of ISO 10427-1:2001.