Metallmaterjalid. Üheteljesuunaliste katseseadmete kontrollimiseks kasutatavate jõumõõteriistade kalibreerimine (ISO 376:2011)

Metallic materials - Calibration of force-proving instruments used for the verification of uniaxial testing machines (ISO 376:2011)

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 376:2011 sisaldab Euroopa standardi EN ISO 376:2011 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 376:2011 consists of the English text of the European standard EN ISO 376:2011.
Standard on kinnitatud Eesti Standardikeskuse 29.07.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 29.07.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 15.06.2011.	Date of Availability of the European standard text 15.06.2011.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 77.040.10

Võtmesõnad: deformatsiooni mõõtmised, dünamomeetrid, jõud, kalibreerimine, klassifikatsioonid, kontrollimine, metalltooted, mõõteriistad, teimiseade, utiliseerimine,

EUROPEAN STANDARD

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English Version

Metallic materials - Calibration of force-proving instruments used for the verification of uniaxial testing machines (ISO 376:2011)

Matériaux métalliques - Étalonnage des instruments de mesure de force utilisés pour la vérification des machines d'essais uniaxiaux (ISO 376:2011)

Metallische Werkstoffe - Kalibrierung der Kraftmessgeräte für die Prüfung von Prüfmaschinen mit einachsiger Beanspruchung (ISO 376:2011)

This European Standard was approved by CEN on 4 June 2011.

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

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Foreword

This document (EN ISO 376:2011) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 101 “Test methods for steel (other than chemical analysis)” 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 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

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 376:2004.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, 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 376:2011 has been approved by CEN as a EN ISO 376:2011 without any modification.

Contents

Page

Introduction

An ISO/TC 164/SC 1 working group has developed procedures for determining the measurement uncertainty of force-proving instruments, and these procedures have been added to this fourth edition as a new annex (Annex C).

In addition, this fourth edition allows the calibration to be performed in two ways:

— with reversible measurement for force-proving instruments which are going to be used with increasing and decreasing forces;

— without reversible measurement for force-proving instruments which are going to be used only with increasing forces.

In the first case, i.e. when the force-proving instrument is going to be used for reversible measurements, the calibration has to be performed with increasing and decreasing forces to determine the hysteresis of the force-proving instrument. In this case, there is no need to perform a creep test.

In the second case, i.e. when the force-proving instrument is not going to be used for reversible measurements, the calibration is performed with increasing forces only but, in addition, a creep test has to be performed. In this case, there is no need to determine the hysteresis.

Metallic materials — Calibration of force-proving instruments used for the verification of uniaxial testing machines

1 Scope

This International Standard specifies a method for the calibration of force-proving instruments used for the static verification of uniaxial testing machines (e.g. tension/compression testing machines) and describes a procedure for the classification of these instruments.

This International Standard is applicable to force-proving instruments in which the force is determined by measuring the elastic deformation of a loaded member or a quantity which is proportional to it.

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/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

3 Terms and definitions

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

3.1
force-proving instrument
whole assembly from the force transducer through to, and including, the indicator

4 Symbols and their designations

Symbols and their designations are given in Table 1.