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Navijalne žice - Preskusne metode - 3. del: Mehanske lastnosti (IEC 60851-3:2009)

Winding wires - Test methods -- Part 3: Mechanical properties

Fils de bobinage - Méthodes d'essai -- Partie 3: Propriétés mécaniques

Ta slovenski standard je istoveten z: EN 60851-3:2009

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60851-3

April 2009

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Supersedes EN 60851-3:1996 + A1:1997 + A2:2003

English version

**Winding wires -
Test methods -
Part 3: Mechanical properties
(IEC 60851-3:2009)**

Fils de bobinage -
Méthodes d'essai -
Partie 3: Propriétés mécaniques
(CEI 60851-3:2009)

Wickeldrähte -
Prüfverfahren -
Teil 3: Mechanische Eigenschaften
(IEC 60851-3:2009)

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This European Standard was approved by CENELEC on 2009-04-01. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 55/1043/CDV, future edition 3 of IEC 60851-3, prepared by IEC TC 55, Winding wires, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60851-3 on 2009-04-01.

This European Standard supersedes EN 60851-3:1996 + A1:1997 + A2:2003.

With respect to EN 60851-3:1996, significant technical changes appear in Subclause 5.3, Jerk test.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2010-01-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-04-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60851-3:2009 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

- | | |
|----------------|--|
| IEC 60851-5 | NOTE Harmonized as EN 60851-5:2008 (not modified). |
| IEC 61033 + A1 | NOTE Harmonized as EN 61033:2006 (not modified). |

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60851-1	- ¹⁾	Winding wires - Test methods - Part 1: General	EN 60851-1	1996 ²⁾
IEC 60851-2	1996	Winding wires - Test methods - Part 2: Determination of dimensions	EN 60851-2	1996
ISO 178 A1	2001 2004	Plastics - Determination of flexural properties	EN ISO 178 A1	2003 2005

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¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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IEC 60851-3

Edition 3.0 2009-01

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Winding wires – Test methods –
Part 3: Mechanical properties**

STANDARD PREVIEW
(standards.iteh.ai)

**Fils de bobinage – Méthodes d'essai –
Partie 3: Propriétés mécaniques**

SIST EN 60851-3:2009

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**WINDING WIRES –
TEST METHODS –****Part 3: Mechanical properties**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60851-3 has been prepared by IEC technical committee 55: Winding wires.

This third edition cancels and replaces the second edition, published in 1996, its amendment 1 (1997) and its amendment 2 (2003), and constitutes a technical revision.

With respect to the previous edition, significant technical changes appear in Subclause 5.3, Jerk test.

The text of this standard is based on the following documents:

CDV	Report on voting
55/1043/CDV	55/1059/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all the parts in the IEC 60851 series, under the general title *Winding wires – Test methods*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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INTRODUCTION

This part of IEC 60851 forms an element of a series of standards, which deals with insulated wires used for windings in electrical equipment. The series has three groups describing

- a) winding wires – Test methods (IEC 60851);
- b) specifications for particular types of winding wires (IEC 60317);
- c) packaging of winding wires (IEC 60264).

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WINDING WIRES – TEST METHODS –

Part 3: Mechanical properties

1 Scope

This part of IEC 60851 specifies the following methods of test for winding wires:

- Test 6: Elongation;
- Test 7: Springiness;
- Test 8: Flexibility and adherence;
- Test 11: Resistance to abrasion;
- Test 18: Heat bonding.

For definitions, general notes on methods of test and the complete series of methods of test for winding wires, see IEC 60851-1.

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.

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IEC 60851-1, *Winding wires – Test methods – Part 1: General*

IEC 60851-2:1996, *Winding wires – Test methods – Part 2: Determination of dimensions*

ISO 178:2001, *Plastics – Determination of flexural properties*

Amendment 1:2004

3 Test 6: Elongation

3.1 Elongation at fracture

Elongation is the increase in length expressed as a percentage of the original length.

A straight piece of wire shall be elongated to the point of fracture of the conductor at a rate of (5 ± 1) mm/s with an elongation tester or with tensile testing equipment with a free measuring length of between 200 mm and 250 mm. The linear increase at fracture shall be calculated as a percentage of the free measuring length.

Three specimens shall be tested. The three single values shall be reported. The mean value represents elongation at fracture.

3.2 Tensile strength

Tensile strength is the ratio of the force at fracture to initial cross-section.