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Standards

Irish Standard
I.S. EN 60317-53:2014

Specifications for particular types of winding wires - Part 53: Aromatic polyamide (aramid) tape wrapped rectangular copper wire, temperature index 220

I.S. EN 60317-53:2014

Incorporating amendments/corrigenda/National Annexes issued since publication:

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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EUROPEAN STANDARD

EN 60317-53

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2014

ICS 29.060.10

Supersedes EN 60317-53:1999

English Version

**Specifications for particular types of winding wires - Part 53:
Aromatic polyamide (aramid) tape wrapped rectangular copper
wire, temperature index 220
(IEC 60317-53:2014)**

Spécifications pour types particuliers de fils de bobinage -
Partie 53: Fil de section rectangulaire en cuivre enveloppé
avec un ruban polyamide aromatique (aramide), d'indice de
température 220
(CEI 60317-53:2014)

Technische Lieferbedingungen für bestimmte Typen von
Wickeldrähten - Teil 53: Flachdrähte aus Kupfer, umwickelt
mit Band aus aromatischen Polyamiden, Temperaturindex
220 (IEC 60317-53:2014)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

Foreword

The text of document 55/1396/CDV, future edition 2 of IEC 60317-53, prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60317-53:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-02-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-05-01

This document supersedes EN 60317-53:1999.

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The text of the International Standard IEC 60317-53:2014 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 60264 Series	NOTE	Harmonized as EN 60264 Series (not modified).
IEC 60317 Series	NOTE	Harmonized as EN 60317 Series (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here:

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60172	-	Test procedure for the determination of the temperature index of enamelled and tape wrapped winding wires	FprEN 60172	-
IEC 60819-3-3	2011	Non-cellulosic papers for electrical purposes -- Part 3: Specifications for individual materials -- Sheet 3: Unfilled aramid (aromatic polyamide) papers	EN 60819-3-3	2011
IEC 60851	series	Methods of test for winding wires	HD 490.1 S1	series

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IEC 60317-53

Edition 2.0 2014-03

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Specifications for particular types of winding wires –
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polyamide aromatique (aramide), d'indice de température 220**





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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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IEC 60317-53

Edition 2.0 2014-03

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**SPECIFICATIONS FOR PARTICULAR
TYPES OF WINDING WIRES –****Part 53: Aromatic polyamide (aramid) tape wrapped
rectangular copper wire, temperature index 220**

FOREWORD

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International Standard IEC 60317-53 has been prepared by IEC technical committee 55: Winding wires.

This second edition cancels and replaces the first edition published in 1999. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- new 3.2.2 containing general notes on winding wire, formerly a part of the scope;
- new 3.3, containing requirements for appearance;
- modification to Clause 15 to delete the note on revisions to IEC 60172;
- new Clause 23, Pin hole test.

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

CDV	Report on voting
55/1396/CDV	55/1458/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.

The numbering of clauses in this standard is not continuous from Clauses 20 and 30 in order to reserve space for possible future wire requirements prior to those for wire packaging.

A list of all parts in the IEC 60317 series, published under the general title *Specifications for particular types of winding wires*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

INTRODUCTION

This part of IEC 60317 is one of a series which deals with insulated wires used for windings in electrical equipment. The series has three groups describing:

- 1) Winding wires – Test methods (IEC 60851);
- 2) Specifications for particular types of winding wires (IEC 60317);
- 3) Packaging of winding wires (IEC 60264).

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 53: Aromatic polyamide (aramid) tape wrapped rectangular copper wire, temperature index 220

1 Scope

This part of IEC 60317 specifies requirements for tape wrapped rectangular copper winding wire of temperature index 220. The insulation consists of one or more wrappings of aromatic polyamide (aramid) tape of various thicknesses.

NOTE The heat shock test is inappropriate for this type of wire, and therefore a heat shock temperature cannot be established. Consequently, a class based on the requirements for temperature index and heat shock temperature cannot be specified.

The range of nominal conductor dimensions covered by this standard is:

- width: min. 2,00 mm max. 16,00 mm;
- thickness: min. 0,80 mm max. 5,60 mm.

The specified combinations of width and thickness as well as the specified ratio width/thickness are given in Table 1.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60172, *Test procedure for the determination of the temperature index of enamelled winding wires*

IEC 60819-3-3:2011, *Non-cellulosic papers for electrical purposes – Part 3: Specifications for individual materials – Sheet 3: Unfilled aramid (aromatic polyamide) papers*

IEC 60851 (all parts), *Winding wires – Test methods*

3 Terms, definitions, general notes and appearance

3.1 Terms and definitions

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

3.1.1

class

thermal performance of a wire expressed by the temperature index and the heat shock temperature

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