

INTERNATIONAL STANDARD



Specifications for particular types of winding wires –
Part 71: Polyester glass-fibre wound **fused** and resin or varnish impregnated,
bare or enamelled round copper wire, temperature index 180



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2020 IEC, Geneva, Switzerland

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 IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

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

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

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 000 terminological entries in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IECNORM.COM : Click to view the full PDF IEC 60377-71:2020 PLV

INTERNATIONAL STANDARD



**Specifications for particular types of winding wires –
Part 71: Polyester glass-fibre wound ~~fused~~ and resin or varnish impregnated,
bare or enamelled round copper wire, temperature index 180**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.060.10

ISBN 978-2-8322-8257-1

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD	3
INTRODUCTION	2
1 Scope	6
2 Normative references	6
3 Terms, definitions, general notes and appearance	6
3.1 Terms and definitions	6
3.2 General notes	6
3.2.1 Methods of test	6
3.2.2 Winding wire	6
3.3 Appearance	7
4 Dimensions	7
5 Electrical resistance	7
6 Elongation	7
7 Springiness	7
8 Flexibility and adherence	7
9 Heat shock	7
10 Cut-through	7
11 Resistance to abrasion	8
12 Resistance to solvents	8
13 Breakdown voltage	8
14 Continuity of insulation	8
15 Temperature index	8
16 Resistance to refrigerants	8
17 Solderability	8
18 Heat or solvent bonding	8
19 Dielectric dissipation factor	8
20 Resistance to transformer oil	8
21 Loss of mass	8
23 Pin hole test	8
30 Packaging	9
Bibliography	10

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 71: Polyester glass-fibre wound ~~fused~~ and resin or varnish impregnated, bare or enamelled round copper wire, temperature index 180

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

International Standard IEC 60317-71 has been prepared by IEC technical committee 55: Winding wires.

This second edition cancels and replaces the first edition published in 2017. The document 55/1767/CDV, circulated to the National Committees as Amendment 1, led to the publication of this new edition.

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

- modification of the title;
- revision to the Scope;
- revision to 3.2.2.

The text of this standard is based on the first edition, its Amendment 1 and the following documents:

CDV	Report on voting
55/1767/CDV	55/1816/RVC

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

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

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 numbering of clauses in this standard is not continuous from Clauses 21 through 30 in order to reserve space for possible future wire requirements prior to those for wire packaging.

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

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

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This part of IEC 60317 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:

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

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 RLV

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 71: Polyester glass-fibre wound ~~fused~~ and resin or varnish impregnated, bare or enamelled round copper wire, temperature index 180

1 Scope

This part of IEC 60317 specifies the requirements of polyester glass-fibre wound ~~fused~~ resin or varnish impregnated, bare, grade 1 or grade 2 enamelled round copper winding wire, temperature index 180. ~~The impregnating agent can be, for instance, epoxy, polyester, or polyesterimide resin based.~~

NOTE For this type of wire, the heat shock test is inappropriate 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 nominal conductor diameters are specified in IEC 60317-0-10:2017, Clause 4.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60317-0-10:2017, *Specifications for particular types of winding wires – Part 0-10: General requirements – Polyester glass-fibre wound fused, unvarnished, or resin or varnish impregnated, bare or enamelled round copper wire*

3 Terms, definitions, general notes and appearance

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60317-0-10 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.2 General notes

3.2.1 Methods of test

Subclause 3.2.1 of IEC 60317-0-10:2017 applies. In case of inconsistencies between IEC 60317-0-10 and this document, the latter shall prevail.

3.2.2 Winding wire

The fibre covering shall consist of a combination of polyester and glass fibres. The glass fibres shall be electrical-grade continuous-filament glass yarn. The polyester fibre shall be a high-grade yarn resulting from the linear polymerization of ethylene glycol and terephthalic acid. The maximum content by weight of polyester fibre in the yarn shall not exceed 50 %.

The enamelled wire shall have a temperature index of at least 180 and shall be agreed between purchaser and supplier.

The temperature index of the wire is dependent upon the type of impregnating agent used. The impregnating agent applied to the polyester glass fibre shall have a minimum temperature index of 180.

The ~~coating~~ covering shall ~~be characterized by~~ have one of the following ~~different~~ grades of thickness:

- PG1: bare conductor with 1 layer of polyester glass fibre or 2 layers of finer polyester glass fibres that together, comply with the dimensional requirements in IEC 60317-0-10;
- PG2: bare conductor with 2 layers of polyester glass fibre;
- grade 1 PG1: enamelled grade 1 (grade 1) with 1 layer of polyester glass fibre (PG1);
- grade 1 PG2: enamelled grade 1 (grade 1) with 2 layers of polyester glass fibre (PG2);
- grade 2 PG1: enamelled grade 2 (grade 2) with 1 layer of polyester glass fibre (PG1);
- grade 2 PG2: enamelled grade 2 (grade 2) with 2 layers of polyester glass fibre (PG2).

3.3 Appearance

Subclause 3.3 of IEC 60317-0-10:2017 applies.

4 Dimensions

Clause 4 of IEC 60317-0-10:2017 applies.

5 Electrical resistance

Clause 5 of IEC 60317-0-10:2017 applies.

6 Elongation

Clause 6 of IEC 60317-0-10:2017 applies.

7 Springiness

Clause 7 of IEC 60317-0-10:2017 applies.

8 Flexibility and adherence

Clause 8 of IEC 60317-0-10:2017 applies.

9 Heat shock

Test inappropriate.

10 Cut-through

Test inappropriate.

11 Resistance to abrasion

Test inappropriate.

12 Resistance to solvents

Test inappropriate.

13 Breakdown voltage

Clause 13 of IEC 60317-0-10:2017 applies.

14 Continuity of insulation

Test inappropriate.

15 Temperature index

Clause 15 of IEC 60317-0-10:2017 applies.

16 Resistance to refrigerants

Test inappropriate.

17 Solderability

Test inappropriate.

18 Heat or solvent bonding

Test inappropriate.

19 Dielectric dissipation factor

Test inappropriate.

20 Resistance to transformer oil

Test inappropriate.

21 Loss of mass

Test inappropriate.

23 Pin hole test

Test inappropriate.

30 Packaging

Clause 30 of IEC 60317-0-10:2017 applies.

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 RLV

Bibliography

IEC 60264 (all parts), *Packaging of winding wires*

IEC 60317 (all parts), *Specifications for particular types of winding wires*

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

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 RLV

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Specifications for particular types of winding wires –
Part 71: Polyester glass-fibre wound and resin or varnish impregnated, bare or
enamelled round copper wire, temperature index 180**

**Spécifications pour types particuliers de fils de bobinage –
Partie 71: Fil de section circulaire en cuivre nu ou émaillé, guipé de fibres de
verre polyester imprégnées de vernis ou de résine, d'indice de température 180**

CONTENTS

FOREWORD	3
INTRODUCTION	5
1 Scope	6
2 Normative references	6
3 Terms, definitions, general notes and appearance	6
3.1 Terms and definitions	6
3.2 General notes	6
3.2.1 Methods of test	6
3.2.2 Winding wire	6
3.3 Appearance	7
4 Dimensions	7
5 Electrical resistance	7
6 Elongation	7
7 Springiness	7
8 Flexibility and adherence	7
9 Heat shock	7
10 Cut-through	7
11 Resistance to abrasion	8
12 Resistance to solvents	8
13 Breakdown voltage	8
14 Continuity of insulation	8
15 Temperature index	8
16 Resistance to refrigerants	8
17 Solderability	8
18 Heat or solvent bonding	8
19 Dielectric dissipation factor	8
20 Resistance to transformer oil	8
21 Loss of mass	8
23 Pin hole test	8
30 Packaging	9
Bibliography	10

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –**Part 71: Polyester glass-fibre wound and resin or varnish impregnated,
bare or enamelled round copper wire, temperature index 180**

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60317-71 has been prepared by IEC technical committee 55: Winding wires.

This second edition cancels and replaces the first edition published in 2017. The document 55/1767/CDV, circulated to the National Committees as Amendment 1, led to the publication of this new edition.

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

- modification of the title;
- revision to the Scope;
- revision to 3.2.2.

The text of this standard is based on the first edition, its Amendment 1 and the following documents:

CDV	Report on voting
55/1767/CDV	55/1816/RVC

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

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

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 numbering of clauses in this standard is not continuous from Clauses 21 through 30 in order to reserve space for possible future wire requirements prior to those for wire packaging.

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

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

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 R.V

INTRODUCTION

This part of IEC 60317 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:

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

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 RLV

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 71: Polyester glass-fibre wound and resin or varnish impregnated, bare or enamelled round copper wire, temperature index 180

1 Scope

This part of IEC 60317 specifies the requirements of polyester glass-fibre wound resin/varnish impregnated, bare, grade 1 or grade 2 enamelled round copper winding wire, temperature index 180.

NOTE For this type of wire, the heat shock test is inappropriate 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 nominal conductor diameters are specified in IEC 60317-0-10:2017, Clause 4.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60317-0-10:2017, *Specifications for particular types of winding wires – Part 0-10: General requirements – Polyester glass-fibre wound fused, unvarnished, or resin or varnish impregnated, bare or enamelled round copper wire*

3 Terms, definitions, general notes and appearance

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60317-0-10 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.2 General notes

3.2.1 Methods of test

Subclause 3.2.1 of IEC 60317-0-10:2017 applies. In case of inconsistencies between IEC 60317-0-10 and this document, the latter shall prevail.

3.2.2 Winding wire

The fibre covering shall consist of a combination of polyester and glass fibres. The glass fibres shall be electrical-grade continuous-filament glass yarn. The polyester fibre shall be a high-grade yarn resulting from the linear polymerization of ethylene glycol and terephthalic acid. The maximum content by weight of polyester fibre in the yarn shall not exceed 50 %.

The enamelled wire shall have a temperature index of at least 180 and shall be agreed between purchaser and supplier.

The temperature index of the wire is dependent upon the type of impregnating agent used. The impregnating agent applied to the polyester glass fibre shall have a minimum temperature index of 180.

The covering shall have one of the following grades of thickness:

- PG1: bare conductor with 1 layer of polyester glass fibre or 2 layers of finer polyester glass fibres that together, comply with the dimensional requirements in IEC 60317-0-10;
- PG2: bare conductor with 2 layers of polyester glass fibre;
- grade 1 PG1: enamelled grade 1 (grade 1) with 1 layer of polyester glass fibre (PG1);
- grade 1 PG2: enamelled grade 1 (grade 1) with 2 layers of polyester glass fibre (PG2);
- grade 2 PG1: enamelled grade 2 (grade 2) with 1 layer of polyester glass fibre (PG1);
- grade 2 PG2: enamelled grade 2 (grade 2) with 2 layers of polyester glass fibre (PG2).

3.3 Appearance

Subclause 3.3 of IEC 60317-0-10:2017 applies.

4 Dimensions

Clause 4 of IEC 60317-0-10:2017 applies.

5 Electrical resistance

Clause 5 of IEC 60317-0-10:2017 applies.

6 Elongation

Clause 6 of IEC 60317-0-10:2017 applies.

7 Springiness

Clause 7 of IEC 60317-0-10:2017 applies.

8 Flexibility and adherence

Clause 8 of IEC 60317-0-10:2017 applies.

9 Heat shock

Test inappropriate.

10 Cut-through

Test inappropriate.

11 Resistance to abrasion

Test inappropriate.

12 Resistance to solvents

Test inappropriate.

13 Breakdown voltage

Clause 13 of IEC 60317-0-10:2017 applies.

14 Continuity of insulation

Test inappropriate.

15 Temperature index

Clause 15 of IEC 60317-0-10:2017 applies.

16 Resistance to refrigerants

Test inappropriate.

17 Solderability

Test inappropriate.

18 Heat or solvent bonding

Test inappropriate.

19 Dielectric dissipation factor

Test inappropriate.

20 Resistance to transformer oil

Test inappropriate.

21 Loss of mass

Test inappropriate.

23 Pin hole test

Test inappropriate.

30 Packaging

Clause 30 of IEC 60317-0-10:2017 applies.

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 RLV

Bibliography

IEC 60264 (all parts), *Packaging of winding wires*

IEC 60317 (all parts), *Specifications for particular types of winding wires*

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

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 RLV

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 RLV

SOMMAIRE

AVANT-PROPOS	13
INTRODUCTION.....	15
1 Domaine d'application	16
2 Références normatives	16
3 Termes, définitions, notes générales et aspect	16
3.1 Termes et définitions	16
3.2 Notes générales.....	16
3.2.1 Méthodes d'essai.....	16
3.2.2 Fil de bobinage.....	16
3.3 Aspect	17
4 Dimensions.....	17
5 Résistance électrique	17
6 Allongement	17
7 Effet de ressort.....	17
8 Souplesse et adhérence	17
9 Choc thermique	17
10 Thermoplasticité	18
11 Résistance à l'abrasion	18
12 Résistance aux solvants	18
13 Tension de claquage	18
14 Continuité de l'isolation	18
15 Indice de température.....	18
16 Résistance aux réfrigérants	18
17 Brasabilité	18
18 Adhérence par chaleur ou par solvant.....	18
19 Facteur de dissipation diélectrique	18
20 Résistance à l'huile de transformateur.....	18
21 Perte de masse	18
23 Détection des microfissures en immersion.....	19
30 Conditionnement	19
Bibliographie.....	20

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

SPÉCIFICATIONS POUR TYPES PARTICULIERS DE FILS DE BOBINAGE –

Partie 71: Fil de section circulaire en cuivre nu ou émaillé, guipé de fibres de verre polyester imprégnées de vernis ou de résine, d'indice de température 180

AVANT-PROPOS

- 1) La Commission Electrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. A cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
- 2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
- 3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
- 4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
- 5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
- 6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
- 7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
- 8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
- 9) L'attention est attirée sur le fait que certains des éléments de la présente Publication de l'IEC peuvent faire l'objet de droits de brevet. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets et de ne pas avoir signalé leur existence.

La Norme internationale IEC 60317-71 a été établie par le comité d'études 55 de l'IEC: Fils de bobinage.

Cette deuxième édition de l'IEC 60317-71 annule et remplace la première édition parue en 2017. Le document 55/1767/CDV, circulé comme Amendement 1 auprès des Comités nationaux de l'IEC, a conduit à la publication de cette nouvelle édition.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- modification du titre;

- révision du Domaine d'application;
- révision du 3.2.2.

Le texte de cette norme est issu des documents suivants:

CDV	Rapport de vote
55/1767/CDV	55/1816/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de l'IEC 60317, publiées sous le titre général *Spécifications pour types particuliers de fils de bobinage*, peut être consultée sur le site web de l'IEC.

La numérotation des articles de la présente norme n'est pas continue entre les Articles 21 et 30 afin de réserver un espace pour d'éventuelles futures exigences applicables au fil avant celles applicables au conditionnement du fil.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "<http://webstore.iec.ch>" dans les données relatives au document recherché. A cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

INTRODUCTION

La présente partie de l'IEC 60317 appartient à l'une des séries de normes qui traitent des fils isolés utilisés pour les enroulements des appareils électriques. L'ensemble est composé des trois séries de normes suivantes:

- 1) *Fils de bobinage – Méthodes d'essai* (série IEC 60851);
- 2) *Spécifications pour types particuliers de fils de bobinage* (série IEC 60317);
- 3) *Conditionnement des fils de bobinage* (série IEC 60264).

IECNORM.COM : Click to view the full PDF of IEC 60317-71:2020 RLV