IEC 60317-70

Edition 1.0 2017-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Withdrawn

Specifications for particular types of winding wires – Part 70: Polyester glass-fibre wound fused, unvarnished or resin or varnish impregnated, bare or enamelled round copper wire, temperature index 155

Spécifications pour types particuliers de fils de bobinage – Partie 70: Fil de section circulaire en cuivre nu ou émaillé, guipé de fibres de verre polyester fondues, non vernies et ou imprégnées de vernis ou de résine, d'indice de température 155

IEC 60317-70:2017-05(en-fr)

Documents
Document Sharing Hub

Full document details: IEC 60317-70 2017

THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2017 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.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'IEC ou du Comité national de l'IEC du pays du demandeur. Si vous avez des questions sur le copyright de l'IEC ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de l'IEC de votre pays de résidence.

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

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
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 corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue
The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub
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 also once a month by email.

Electropedia - www.electropedia.org
The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions 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
65 000 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.

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: csc@iec.ch.

A propos de l'IEC
La Commission Electrotechnique Internationale (IEC) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications IEC
Le contenu technique des publications IEC est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Catalogue IEC - webstore.iec.ch/catalogue
Application autonome pour consulter tous les renseignements bibliographiques sur les Normes internationales, Spécifications techniques, Rapports techniques et autres documents de l'IEC. Disponible pour PC, Mac OS, tablettes Android et iPad.

Recherche de publications IEC - www.iec.ch/searchpub

La recherche avancée permet de trouver des publications IEC en utilisant différents critères (numéro de référence, texte, comité d'études,…). Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

IEC Just Published - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications IEC. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - www.electropedia.org

Le premier dictionnaire en ligne de termes électroniques et électriques. Il contient 20 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans 16 langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (IEV) en ligne.

Glossaire IEC - std.iec.ch/glossary
65 000 entrées terminologiques électrotechniques, en anglais et en français, extraites des articles Termes et Définitions des publications IEC parues depuis 2002. Plus certaines entrées antérieures extraites des publications des CE 37, 77, 86 et CISPR de l'IEC.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: csc@iec.ch.

Withdrawn

AVA Documents
Document Sharing Hub

Full document details: IEC 60317-70 2017

IEC 60317-70

Edition 1.0 2017-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

withdrawn

Specifications for particular types of winding wires – Part 70: Polyester glass-fibre wound fused, unvarnished or resin or varnish impregnated, bare or enamelled round copper wire, temperature index 155

Spécifications pour types particuliers de fils de bobinage – Partie 70: Fil de section circulaire en cuivre nu ou émaillé, guipé de fibres de verre polyester fondues, non vernies et ou imprégnées de vernis ou de résine, d'indice de température 155

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.060.10

ISBN 978-2-8322-4263-6

Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

AVA Documents
Document Sharing Hub

® Registered trademark of the International Electrotechnical Commission
Marque déposée de la Commission Electrotechnique Internationale

Full document details: IEC 60317-70 2017

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

Withdrawn

Documents
Document Sharing Hub

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 70: Polyester glass-fibre wound fused, unvarnished or resin or varnish impregnated, bare or enamelled round copper wire, temperature index 155

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 60317-70 has been prepared by IEC technical committee 55: Winding wires.

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

FDIS	Report on voting
55/1602/FDIS	55/1609/RVD

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

Withdrawn

AVA Documents Document Sharing Hub

Full document details: IEC 60317-70 2017

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 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.

withdrawn

Documents
Document Sharing Hub

Full document details: IEC 60317-70 2017

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).

withdrawn

Documents
Document Sharing Hub

Full document details: IEC 60317-70 2017

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 70: Polyester glass-fibre wound fused, unvarnished or resin or varnish impregnated, bare or enamelled round copper wire, temperature index 155

withdrawn

1 Scope

This part of IEC 60317 specifies requirements of polyester glass-fibre wound fused, unvarnished or resin or varnish impregnated, bare or grade 1 or grade 2 enamelled round copper winding wires, temperature index 155. 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.

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 %.

AVA Documents
Document Sharing Hub

Full document details: IEC 60317-70 2017