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IEC 60317-25

Edition 4.0 2020-06
REDLINE VERSION

INTERNATIONAL STANDARD

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Specifications for particular types of winding wires – Part 25: Polyester or polyesterimide overcoated with polyamide-imide enamelled round aluminium wire, class 200

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 25: Polyester or polyesterimide overcoated with polyamide-imide enamelled round aluminium wire, class 200

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This fourth edition cancels and replaces the third edition published in 2010. This edition constitutes a technical revision.

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

a) new 3.2.2 containing general notes on winding wire, formerly a part of the Scope;
b) revision to Clause 11 to take into account intermediate nominal conductor diameters;
c) revision to Clause 7 to indicate that the springiness test is inappropriate.
d) revision to Clause 16 to specify only the percentage of extractable matter and the minimum retained dielectric breakdown voltage.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
55/1840/FDIS	55/1857/RVD

Full information on the voting for the approval of this document 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.

This International Standard is to be used in conjunction with IEC 60317-0-3:2008, Amendment 1:2013 and Amendment 2:2019.

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.

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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. It is composed of the following series:

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).

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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 25: Polyester or polyesterimide overcoated with polyamide-imide enamelled round aluminium wire, class 200

1 Scope

This part of IEC 60317 specifies the requirements of enamelled round aluminium winding wires of class 200 with a dual coating. The underlying coating is based on polyester or polyesterimide resin, which ~~may~~ can be modified provided it retains the chemical identity of the original resin and meets all specified wire requirements. The superimposed coating is based on polyamide-imide resin.

NOTE A modified resin is a resin that has undergone a chemical change, or contains one or more additives to enhance certain performance or application characteristics.

~~Class 200 is a thermal class that requires a minimum temperature index of 200 and a heat shock temperature of at least 220 °C.~~

~~The temperature in degrees Celsius corresponding to the temperature index is not necessarily that at which it is recommended that the wire be operated and this will depend on many factors, including the type of equipment involved.~~

The range of nominal conductor diameters covered by this document is:

– Grade 1: ~~0,400~~ 0, 250 mm up to and including 3,150 mm;
– Grade 2: ~~0,400~~ 0,250 mm up to and including 5,000 mm.

The nominal conductor diameters are specified in Clause 4 of IEC 60317-0-3:2008 and IEC 60317-0-3:2008/AMD1:2013.

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 60317-0-3: 2008, *Specifications for particular types of winding wires – Part 0-3: General requirements – Enamelled round aluminium wire*
IEC 60317-0-3: 2008/AMD1:2013
IEC 60317-0-3: 2008/AMD2:2019

~~IEC 60851-4:1996, *Winding wires – Test methods – Part 4: Chemical properties*~~
~~Amendment 1 (1997)~~
~~Amendment 2 (1997)~~

~~IEC 60851-5:2008, *Winding wires – Test methods – Part 5: Electrical properties*~~

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Edition 4.0 2020-06

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Specifications for particular types of winding wires – Part 25: Polyester or polyesterimide overcoated with polyamide-imide enamelled round aluminium wire, class 200

Spécifications pour types particuliers de fils de bobinage – Partie 25: Fil de section circulaire en aluminium émaillé revêtu de polyester ou de polyesterimide avec du polyamide-imide, de classe 200

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

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SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

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– Grade 1: 0,250 mm up to and including 3,150 mm;

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IEC 60317-0-3: 2008, *Specifications for particular types of winding wires – Part 0-3: General requirements – Enamelled round aluminium wire*
IEC 60317-0-3: 2008/AMD1:2013
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SPÉCIFICATIONS POUR TYPES PARTICULIERS DE FILS DE BOBINAGE –

Partie 25: Fil de section circulaire en aluminium émaillé revêtu de polyester ou de polyesterimide avec du polyamide-imide, de classe 200

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La Norme internationale IEC 60317-25 a été établie par le comité d'études 55 de l'IEC: Fils de bobinage.

Cette quatrième édition annule et remplace la troisième édition parue en 2010. Cette édition constitue une révision technique.

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

a) ajout d'un nouveau 3.2.2 contenant des notes générales sur le fil de bobinage intégrées auparavant au domaine d'application);
b) révision de l'Article 11 afin de tenir compte des conducteurs de diamètre nominal intermédiaire;

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c) révision de l'Article 7 pour indiquer que l'essai concernant l'effet de ressort n'est pas applicable;

d) révision de l'Article 16 afin de spécifier uniquement le pourcentage de matière extractible et la tension de claquage diélectrique minimale retenue.

Le texte de cette Norme internationale est issu des documents suivants:

FDIS	Rapport de vote
55/1840/FDIS	55/1857/RVD

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

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

La présente Norme internationale doit être utilisée conjointement avec l'IEC 60317-0-3:2008, son Amendement 1:2013 et son Amendement 2:2019.

Une liste de toutes les parties de la série 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 dans la présente norme n'est pas continue entre les Articles 21 et 30 afin de permettre l'introduction d'éventuelles futures exigences pour les fils avant celles concernant le conditionnement des fils.

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INTRODUCTION

La présente partie de l'IEC 60317 fait partie d'une série de normes qui traite des fils isolés utilisés dans les enroulements des appareils électriques. L'ensemble est composé des 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).

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SPÉCIFICATIONS POUR TYPES PARTICULIERS DE FILS DE BOBINAGE –

Partie 25: Fil de section circulaire en aluminium émaillé revêtu de polyester ou de polyesterimide avec du polyamide-imide, de classe 200

1 Domaine d'application

La présente partie de l'IEC 60317 spécifie les exigences relatives aux fils de bobinage de section circulaire en aluminium émaillés de classe 200 à double revêtement. La sous-couche de revêtement est à base de résine polyester ou polyesterimide qui peut être modifiée sous réserve qu'elle conserve les propriétés chimiques de la résine initiale et respecte l'ensemble des exigences spécifiées du fil. La surcouche de revêtement est un matériau à base de résine polyamide-imide.

NOTE Une résine modifiée est une résine dont les propriétés chimiques ont été modifiées ou qui contient un ou plusieurs additifs visant à améliorer certaines performances ou caractéristiques d'application.

La gamme des diamètres nominaux des conducteurs couverts par le présent document est:

– Grade 1: 0,250 mm jusques et y compris 3,150 mm;
– Grade 2: 0,250 mm jusques et y compris 5,000 mm.

Les diamètres nominaux des conducteurs sont spécifiés à l'Article 4 de l'IEC 60317-0-3:2008 et de l'IEC 60317-0-3:2008/AMD1:2013.

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60317-0-3:2008, *Spécifications pour types particuliers de fils de bobinage – Partie 0-3: Exigences générales – Fil de section circulaire en aluminium émaillé*
IEC 60317-0-3: 2008/AMD1:2013
IEC 60317-0-3: 2008/AMD2:2019