SLOVENSKI STANDARD
oSIST prEN IEC 60317-89:2023

01-marec-2023

Specifikacije za posebne vrste navijalnih žic - 89. del: Okrogla aluminijeva žica, lakirana s poliesterimidnim lakom, razred 200

Specifications for particular types of winding wires - Part 89: Polyesterimide enameled round aluminum wire, class 200

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Ta slovenski standard je istoveten z: **prEN IEC 60317-89:2023**

ICS:

29.060.10	Žice	Wires
77.150.10	Aluminijski izdelki	Aluminium products

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55/1939/CDV

COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:	
IEC 60317-89 ED1	
DATE OF CIRCULATION:	CLOSING DATE FOR VOTING:
2023-01-20	**2023-04-14**
SUPERSEDES DOCUMENTS:	
55/1925/CD, 55/1934/CC	

IEC TC 55 : WINDING WIRES	
SECRETARIAT: United States of America	SECRETARY: Mr Mike Leibowitz
OF INTEREST TO THE FOLLOWING COMMITTEES: TC 2	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☒ QUALITY ASSURANCE ☐ SAFETY	
☒ SUBMITTED FOR CENELEC PARALLEL VOTING **Attention IEC-CENELEC parallel voting** The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting. The CENELEC members are invited to vote through the CENELEC online voting system.	☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

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- any relevant “in some countries” clauses to be included should this proposal proceed. Recipients are reminded that the enquiry stage is the final stage for submitting "in some countries" clauses. See AC/22/2007.

TITLE:

Specifications for particular types of winding wires - Part 89: Polyesterimide enameled round aluminum wire, class 200

PROPOSED STABILITY DATE: 2025

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATIONS FOR PARTICULAR TYPES OF WINDING WIRES –

Part 89: Polyesterimide enamelled round aluminium wire, class 200

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International Standard IEC 60317-89 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
XX/XX/XX	55/XXXX/XX

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.

This International Standard is to be read in conjunction with IEC 60317-0-3 (2019).

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

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

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

95 • reconfirmed,
96 • withdrawn,
97 • replaced by a revised edition, or
98 • amended.
99

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INTRODUCTION

This part of IEC 60317 belongs to 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 89: Polyesterimide enamelled round aluminium wire, class 200

1 Scope

This part of IEC 60317 specifies the requirements of enamelled round aluminium winding wire of class 200 with a sole coating based on polyesterimide resin, which may be modified providing it retains the chemical identity of the original resin and meets all specified wire requirements.

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.

The range of nominal conductor diameters covered by this standard is as follows:

– grade 1: 0,250 mm up to and including 1,600 mm;

– grade 2: 0,250 mm up to and including 5,000 mm.

The nominal conductor diameters are specified in Clause 4 of IEC 60317-0-3:2019.

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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.

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

IEC 60851-4: 2016: *Winding wires - Test methods - Part 4: Chemical properties*

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 60317-0-3 and the following 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

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3.2 General notes

3.2.1 Methods of test

Subclause 3.2.1 of IEC 60317-0-3 applies. In case of inconsistencies between IEC 60317-0-3:2019 and this document, the latter shall prevail.

3.2.2 Winding wire

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.

3.3 Appearance

Subclause 3.3 of IEC 60317-0-3:2019 applies.

4 Dimensions

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Clause 4 of IEC 60317-0-3:2019 applies.

5 Electrical resistance

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Clause 5 of IEC 60317-0-3:2019 applies.

6 Elongation

Clause 6 of IEC 60317-0-3:2019 applies.

7 Springiness

Test inappropriate.

8 Flexibility and adherence

Clause 8 of IEC 60317-0-3:2019 applies.

9 Heat shock

Clause 9 of IEC 60317-0-3:2019 applies, where the minimum heat shock temperature shall be 220 °C.

10 Cut-through

Test inappropriate.

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11 Resistance to abrasion

(nominal conductor diameters up to and including 2,500 mm)

The wire shall meet the requirements given in Table 1.

Table 1– Resistance to abrasion

Nominal conductor diameter	Grade 1		Grade 2	
	Minimum average force to failure	Minimum force to failure of each measurement	Minimum average force to failure	Minimum force to failure of each measurement
mm	N	N	N	N
0,250	1,30	1,10	2,45	2,10
0,280	1,45	1,20	2.60	2,25
0,315	1,60	1,30	2,80	2,40
0,355	1,75	1,50	3,00	2,55
0,400	1,95	1,65	3,15	2,65
0,450	2,10	1,75	3,40	2,85
0,500	2,25	1,90	3,60	3,05
0,560	2,40	2,05	3,85	3,25
0,630	2,55	2,20	4,15	3,50
0,710	2,75	2,35	4,45	3,75
0,800	2,95	2,50	4,75	4,05
0,900	3,15	2,70	5,10	4,30
1,000	3,40	2,90	5,45	4,60
1,120	3,70	3,10	5,80	4,90
1,250	3,95	3,35	6,25	5,25
1,400	4,25	3,60	6,65	5,45
1,600	4,60	3,90	7,15	5,85
1,800	-	-	7,70	6,50
2,000	-	-	8,20	6,95
2,240	-	-	8,75	7,40
2,500	-	-	9,30	7,90
For intermediate nominal conductor diameters, the value of the next largest nominal conductor diameter shall be taken.				

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12 Resistance to solvents

Clause 12 of IEC 60317-0-3:2019 applies.