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Winding wires - Test methods - Electrical endurance under high frequency voltage impulses

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Technical Specification.

The text of this Technical Specification is based on the following documents:

Draft	Report on voting
55/2068/DTS	55/2073/RVDTS

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Specification is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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– reconfirmed,
– withdrawn, or
– revised.

This Technical Specification 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:

a) Winding wires – Test methods (IEC 60851 (all parts) [1]);

b) Specifications for particular types of winding wires (IEC 60317 (all parts) [2]);

c) Packaging of winding wires (IEC 60264 (all parts) [3]).

This document describes a test method for evaluating the lifetime (3.9) of winding wires under electrical high frequency voltage impulses (with partial discharges) at elevated temperatures. This method is only applicable as a comparative examination under a given sample preparation and testing environment. The comparative nature of this document lies in the fact that the lifetime (3.9) under partial discharges depends on a large number of influencing factors in the sample preparation and test conditions which could not all be thoroughly investigated so far.

This document applies to round and rectangular magnet wires.

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 60172:2020, *Test procedure for the determination of the temperature index of enamelled and tape wrapped winding wires*

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