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IEC TR 61857-2

Edition 1.0 2015-04

TECHNICAL REPORT

**Electrical insulation systems – Procedures for thermal evaluation –
Part 2: Selection of the appropriate test method for evaluation and classification
of electrical insulation systems**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.080.30

ISBN 978-2-8322-2594-3

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSULATION SYSTEMS – PROCEDURES FOR THERMAL EVALUATION –

Part 2: Selection of the appropriate test method for evaluation and classification of electrical insulation systems

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The main task of IEC technical committees is to prepare International Standards. However, a technical committee may propose the publication of a technical report when it has collected data of a different kind from that which is normally published as an International Standard, for example "state of the art".

IEC TR 61857-2, which is a technical report, has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
112/312/DTR	112/318/RVC

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

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

A list of all parts in the IEC 61857 series, published under the general title *Electrical insulation systems – Procedures for thermal evaluation*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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- withdrawn,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.

A bilingual version of this publication may be issued at a later date.

ELECTRICAL INSULATION SYSTEMS – PROCEDURES FOR THERMAL EVALUATION –

Part 2: Selection of the appropriate test method for evaluation and classification of electrical insulation systems

1 Scope

This part of IEC 61857 gives guidelines to identify the appropriate test method to be used for the evaluation of a proposed Electrical Insulation System (EIS). Some of the standards are for evaluation and classification of the EIS, while other standards identify the appropriate method to evaluate single or multi-factor stresses of a proposed or of an established EIS.

This Technical Report is applicable to existing or proposed EIS used in electrotechnical products across a wide range of operating voltages of IEC Standards. The report takes care to select the appropriate standard based on construction and intended operating conditions.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60034-18-21, *Rotating electrical machines – Part 18-21: Functional evaluation of insulation systems – Test procedures for wire-wound windings – Thermal evaluation and classification*

IEC 60034-18-31, *Rotating electrical machines – Part 18-31: Functional evaluation of insulation systems – Test procedures for form-wound windings – Thermal evaluation and classification of insulation systems used in rotating machines*

IEC 60505, *Evaluation and qualification of electrical insulation systems*

IEC 61857-1, *Electrical insulation systems – Procedures for thermal evaluation – Part 1: General requirements – Low-voltage*

IEC 61857-21, *Electrical insulation systems – Procedures for thermal evaluation – Part 21: Specific requirements for general-purpose models – Wire-wound applications*

IEC 61857-22, *Electrical insulation systems – Procedures for thermal evaluation – Part 22: Specific requirements for encapsulated-coil model – Wire-wound electrical insulation system (EIS)*

IEC 61858-1, *Electrical insulation systems – Thermal evaluation of modifications to an established electrical insulation system (EIS) – Part 1: Wire-wound winding EIS*

IEC 61858-2, *Electrical insulation systems – Thermal evaluation of modifications to an established electrical insulation system (EIS) – Part 2: Form-wound EIS*

IEC TS 61934, *Electrical insulating materials and systems – Electrical measurement of partial discharges (PD) under short rise time and repetitive voltage impulses*

IEC 62068, *Electrical insulating materials and systems – General method of evaluation of electrical endurance under repetitive voltage impulses*

IEC TS 62101, *Electrical insulation systems – Short-time evaluation of combined thermal and electrical stresses*

IEC TS 62332-1, *Electrical insulation systems (EIS) – Thermal evaluation of combined liquid and solid components – Part 1: General requirements*

IEC TS 62332-2, *Electrical insulation systems (EIS) – Thermal evaluation of combined liquid and solid components – Part 2: Simplified test*