TECHNICAL SPECIFICATION

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSULATING MATERIALS AND SYSTEMS – ELECTRICAL MEASUREMENT OF PARTIAL DISCHARGES (PD) UNDER SHORT RISE TIME AND REPETITIVE VOLTAGE IMPULSES

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 61934, which is a technical specification, has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems[1].

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1 Provisional title.

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

Enquiry draft	Report on voting
112/13/DTS	112/25/RVC

Full information on the voting for the approval of this technical specification 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 bilingual version of this publication may be issued at a later date.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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

- transformed into an International standard,
- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

ELECTRICAL INSULATING MATERIALS AND SYSTEMS – ELECTRICAL MEASUREMENT OF PARTIAL DISCHARGES (PD) UNDER SHORT RISE TIME AND REPETITIVE VOLTAGE IMPULSES

1 Scope

This Technical Specification is applicable to the off-line electrical measurement of partial discharges (PD) that occur in electrical insulation systems (EIS) when stressed by repetitive voltage impulses having a rise time of 50 μs or less.

Typical applications are EIS belonging to apparatus driven by power electronics, such as motors.

NOTE 1 Use of this document with specific products may require specification of additional procedures.

NOTE 2 Those described in the TS are emerging technologies, so that experience and cautions, as well as certain preconditions, are needed to apply this TS.

Excluded are

– methods based on optical or ultrasonic PD detection,

– fields of application for PD measurements when stressed by non-repetitive impulse voltages.

2 Normative references

The following referenced documents are indispensable for the application 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 60270:2000, *High voltage test techniques – Partial discharge measurements*

IEC 62068-1:2003, *Electrical insulation systems – Electrical stresses produced by repetitive impulses – Part 1: General method of evaluation of electrical endurance*