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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Rotating electrical machines – Part 2-2: Specific methods for determining separate losses of large machines from tests – Supplement to IEC 60034-2-1

Machines électriques tournantes – Partie 2-2: Méthodes spécifiques pour déterminer les pertes séparées des machines de grande taille à partir d'essais – Complément à la CEI 60034-2-1

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ROTATING ELECTRICAL MACHINES –

Part 2-2: Specific methods for determining separate losses of large machines from tests – Supplement to IEC 60034-2-1

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International Standard IEC 60034-2-2 has been prepared by IEC technical committee 2: Rotating machinery.

The text of this standard is based on the following documents:

FDIS	Report on voting
2/1585/FDIS	2/1595/RVD

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

NOTE A table of cross-references of all IEC TC 2 publications can be found in the IEC TC 2 dashboard on the IEC website.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability 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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

ROTATING ELECTRICAL MACHINES –

Part 2-2: Specific methods for determining separate losses of large machines from tests – Supplement to IEC 60034-2-1

1 Scope

This part of IEC 60034 applies to large rotating electrical machines and establishes additional methods of determining separate losses and to define an efficiency supplementing IEC 60034-2-1. These methods apply when full-load testing is not practical and result in a greater uncertainty.

NOTE In situ testing according to the calorimetric method for full-load conditions is recognized.

The specific methods described are:

– Calibrated-machine method.
– Retardation method.
– Calorimetric method.

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 60034-1, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60034-2-1, *Rotating electrical machines – Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60034-1 and IEC 60034-2-1 apply, as well as the following.

3.1
calibrated machine
machine whose mechanical power input/output is determined, with low uncertainty, using measured electrical output/input values according to a defined test procedure

3.2
calibrated-machine method
method in which the mechanical input/output to/from an electrical machine under test is determined from the measurement of the electrical input/output of a calibrated machine mechanically coupled to the test machine

3.3
retardation method
method in which the separate losses in a machine under test are deduced from the measurements of the deceleration rate of its rotating components when only these losses are present