

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Rotating electrical machines –
Part 23: Repair, overhaul and reclamation**

**Machines électriques tournantes –
Partie 23: Réparation, révision et remise en état**





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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ROTATING ELECTRICAL MACHINES –
Part 23: Repair, overhaul and reclamation**

FOREWORD

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International Standard IEC 60034-23 has been prepared by IEC technical committee 2: Rotating machinery.

This first edition cancels and replaces IEC TS 60034-23 published in 2003. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- the title of the standard has been changed to *Rotating electrical machines – Part 23: Repair, overhaul and reclamation*;
- Clause 1 Scope
 - Hydrogen cooled turbine generators added to special applications,
 - maintaining or improving the rated energy efficiency added
 - ensuring environmental considerations are taken into account added;

- Clause 4 General Principles added to cover: hazardous areas, traction motors, machine efficiency, environment, end of life recycling, and circular economy considerations;
- Clause 5 General: Scope of work, health and safety, standards, quality, information required and documentation now covered;
- Original Annexes B and C incorporated into the standard;
- Clause 9 Final tests updated;
- Clause 10 Additional requirements for the repair and testing of DC machines added;
- Clause 11 Additional requirements for the repair and testing of High Voltage AC machines added;
- Clause 12 Customer reports and handover added;
- New Annex B standard tolerances added.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
2/1923/FDIS	2/1924/RVD

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.

A list of all parts in the IEC 60034 series, published under the general title *Rotating electrical machines*, can be found on the IEC website.

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

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- withdrawn,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

ROTATING ELECTRICAL MACHINES –

Part 23: Repair, overhaul and reclamation

1 Scope

This part of IEC 60034 covers the procedures necessary to ensure the satisfactory repair, overhaul, and reclamation of all types and sizes of rotating electrical machines covered by the IEC 60034 series. The standard creates a generic industry procedure covering common aspects of a complete repair. The scope of work depends on the machine type, rating, condition, and the importance of plant reliability and safety. It includes

- determining cause of failure, where necessary;
- determining the extent of repair, as applicable;
- defining revised performance, operating and ambient conditions, if required;
- reviewing the original design, and upgrading the specification of the design, if required;
- proving the quality and performance of the repaired machine, maintaining or improving the rated energy efficiency;
- ensuring environmental considerations are taken into account.

This document does not supersede the requirements prescribed in IEC 60079-19 or elsewhere concerning the repair and overhaul for machines used in explosive atmospheres.

Machines for special applications such as hermetic submersible, nuclear, hydrogen cooled machines, military, aviation and traction motors might have additional requirements, which are the subject of agreement between the service facility and user.

This document is not intended to take the place of the original machine manufacturer's instructions and recommendations.

Re-designs and performance changes requiring machine designer input are beyond the scope of this document.

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 60034 (all parts), *Rotating electrical machines*

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

IEC 60034-6, *Rotating electrical machines – Part 6: Methods of cooling (IC Code)*

IEC 60034-11, *Rotating electrical machines – Part 11: Thermal protection*

IEC 60034-30-1, *Rotating electrical machines – Part 30-1: Efficiency classes of line operated AC motors (IE code)*