IEC 63182-2

Edition 1.0 2020-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Magnetic powder cores – Guidelines on dimensions and the limits of surface irregularities – Part 2: Ring-cores

Noyaux en poudre magnétique comprimée – Lignes directrices concernant les dimensions et les limites des irrégularités de surface – Partie 2: Tores

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MAGNETIC POWDER CORES – GUIDELINES ON DIMENSIONS AND THE LIMITS OF SURFACE IRREGULARITIES –

Part 2: Ring-cores

FOREWORD

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International Standard IEC 63182-2 has been prepared by IEC technical committee 51: Magnetic components, ferrite and magnetic powder materials.

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

FDIS	Report on voting
51/1348/FDIS	51/1352/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 of IEC 63182 series, published under the general title *Magnetic powder cores – Guidelines on dimensions and the limits of surface irregularities,* 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- withdrawn,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.

MAGNETIC POWDER CORES – GUIDELINES ON DIMENSIONS AND THE LIMITS OF SURFACE IRREGULARITIES –

Part 2: Ring-cores

1 Scope

This part of IEC 63182 specifies the dimensions that are of importance for mechanical interchangeability for a preferred range of ring-cores (also called toroids) made of magnetic powder, the effective parameter values to be used in calculations involving them, and gives guidelines on allowable limits of surface irregularities applicable to coated ring-cores.

The selection of core sizes for this document is based on the philosophy of including those sizes which are industrial standards, meaning that they are in broad-based use within the industry. This document is considered as a sectional specification useful in the negotiations between magnetic powder core manufacturers and users about surface irregularities.

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 63182-1, *Magnetic powder cores – Guidelines on dimensions and the limits of surface irregularities – Part 1: General specification*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in IEC 63182-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
chamfered edge
circular or subcircular corner edge of core

Note 1 to entry: To facilitate the winding process, prior to applying the coating, the four sharp corner edges of the ring-cores should be smoothed out using specialized machinery. Alternatively, rounding off some or all of the corner edges can be achieved with rounded tooling components when powder is compacted to form the core.

4 Primary standards

4.1 General

Compliance with the following requirements ensures mechanical interchangeability of complete assemblies and wound coils.