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colour inside

Magnetic materials –
Part 1-1: Classification – Surface insulations of electrical steel ~~sheet, strip~~ strip, sheet and laminations

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MAGNETIC MATERIALS –

Part 1-1: Classification – Surface insulations of electrical steel ~~sheet, strip~~ strip, sheet and laminations

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In this Redline version, a vertical line in the margin shows where the technical content is modified by amendment 1. Additions are in green text, deletions are in strikethrough red text. A separate Final version with all changes accepted is available in this publication.

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MAGNETIC MATERIALS –

Part 1-1: Classification – Surface insulations of electrical steel ~~sheet, strip~~ strip, sheet and laminations

1 Scope

This part of IEC 60404 establishes a classification of surface insulations for electrical steel ~~sheet, strip~~ strip, sheet and laminations according to their general composition, relative insulating ability and function.

These surface insulations are either oxide layers or applied coatings.

The purpose of this classification is to create a nomenclature for the various types of surface insulations and to assist users of surface insulations by providing general information about the chemical nature and use of the surface insulations.

It is not the intent of this classification to specify insulation requirements in terms of specific values of surface insulation resistance. Such requirements are agreed between the purchaser and the steel producer, where applicable.

The classification is used in conjunction with the various specifications for cold rolled electrical steels (see the standards in the IEC 60404-8 series in Clause 2).

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 60050 (221), *International Electrotechnical Vocabulary (IEV) - Chapter 221: Magnetic materials and components*

~~IEC 60404-8-2:1998, *Magnetic materials – Part 8-2: Specifications for individual materials – Cold-rolled electrical alloyed steel sheet and strip delivered in the semi-processed state*~~

IEC 60404-8-3~~:1998~~, *Magnetic materials – Part 8-3: Specifications for individual materials – Cold-rolled ~~electrical non-alloyed steel sheet and strip~~ non-oriented electrical steel strip and sheet delivered in the semi-processed state*

IEC 60404-8-4~~:1998~~, *Magnetic materials – Part 8-4: Specifications for individual materials – Cold-rolled non-oriented electrical steel ~~sheet and strip~~ strip and sheet delivered in the fully-processed state*

IEC 60404-8-5~~:1989~~, *Magnetic materials – Part 8-5: Specifications for individual materials – ~~Specification for steel sheet and strip with specified mechanical properties and magnetic permeability~~ Electrical steel strip and sheet with specified mechanical properties and magnetic polarization*

IEC 60404-8-7~~:1998~~, *Magnetic materials – Part 8-7: Specifications for individual materials – Cold-rolled grain-oriented electrical steel ~~sheet and strip~~ strip and sheet delivered in the fully-processed state*

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IEC 60404-8-4, *Magnetic materials – Part 8-4: Specifications for individual materials – Cold-rolled non-oriented electrical steel strip and sheet delivered in the fully-processed state*

IEC 60404-8-5, *Magnetic materials – Part 8-5: Specifications for individual materials – Electrical steel strip and sheet with specified mechanical properties and magnetic polarization*

IEC 60404-8-7, *Magnetic materials – Part 8-7: Specifications for individual materials – Cold-rolled grain-oriented electrical steel strip and sheet delivered in the fully-processed state*

IEC 60404-8-8, *Magnetic materials – Part 8-8: Specifications for individual materials – Thin electrical steel strip and sheet for use at medium frequencies*

IEC 60404-11, *Magnetic materials – Part 11: Methods of measurement of the surface insulation resistance of electrical steel strip and sheet*