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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 2521.1-2016

**Cold-rolled electrical steel delivered in the fully-processed state
-- Part 1: Grain non-oriented steel strip (sheet)
(English Translation)**

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Foreword

GB/T 2521 Cold-rolled Electrical Steel Delivered in the Fully-processed State is divided into the following two parts.

---Part 1. Grain Non-oriented Steel Strip (sheet)

---Part 2. Grain-oriented Steel Strip (sheet)

This is Part 1 of GB/T 2521.

This Part is drafted in accordance with stipulations in GB/T 1.1-2009.

This Part serves as a replacement of "cold-rolled non-oriented electrical steel strip (sheet)" in GB/T 2521-2008 Cold-rolled Grain-oriented and Non-oriented Electrical Steel Strip (sheet). In comparison with GB/T 2521-2008, there are several main technical changes as follows.

---The name of the Standard is adjusted into Cold-rolled Electrical Steel Delivered in the Fully-processed State - Part 1. Grain Non-oriented Steel Strip (sheet);

- All content regarding cold-rolled-oriented electrical steel is deleted;
- The range of the internal diameter of steel coil is added;
- The requirements and test methods of anisotropy of the total loss ratio of cold-rolled non-oriented electrical steel strip (sheet) are added;
- 6 designations are added, namely. 35W210, 65W310, 65W350, 65W400, 65W470 and 65W530; 10 designations are cancelled, namely. 35W330, 35W400, 50W330, 50W530, 50W700, 50W1300, 65W700, 65W1000, 65W1300 and 65W1600;
- The magnetic polarization of some designations is improved;
- "Magnetic properties" is modified into "magnetic performance"; "process properties" is modified into "technical properties";
- The longitudinal thickness tolerance and transverse thickness tolerance of steel strip (sheet) are adjusted;
- The requirements and test methods of the tolerance of sheared edges triggered by internal stress are added;
- Appendix A (normative) Repeated Bending Test Method is added;
- Appendix B (normative) Coating Insulation Resistance Test Method is added;
- The tensile strength, elongation index and inspection method of various designations are deleted; in order to make it convenient for reference, grain non-oriented electrical steel strip (sheet) mechanical properties is modified into informative appendix (please refer to Appendix C);
- Appendix D (informative) Properties and Main Purposes of Various Designations is added;
- Chapter 10 "Objection" is deleted.

This Part adopts the re-drafting law for modification in accordance with IEC 60404-8-

4.2013 Magnetic Materials - Part 8-4.Specifications for Individual Materials - Cold-rolled Non-oriented Electrical Steel Strip and Sheet Delivered in the Fully-processed State.

In comparison with IEC 60404-8-4.2013, there are many structural adjustments in this Part. Appendix F provides a comparison table of chapter number in this Part and IEC 60404-8-4.2013.

There are several technical differences between this Part and IEC 60404-8-4.2013. Provisions that involve these differences are already indicated with vertical single line () in the blankness of the outer margin. Appendix G provides a table of relevant technical differences and the reasons of these differences. Appendix E provides a comparison table of designations in this Part and IEC 60404-8-4.2013.

This Standard was proposed by China Iron and Steel Industry Association.

This Standard shall be under the jurisdiction of National Technical Committee (183) on Iron and Steel of Standardization Administration of China (SAC/TC 183).

The drafting organizations of this Part. Wuhan Iron and Steel (Group) Company, China Metallurgical Information and Standardization Institute, SHOUGANG Group, ANSTEEL Group, Xinyu Iron & Steel Group Co., Ltd.

1 Scope

This Part of GB/T 2521 specifies the terms, definitions, classification, symbols and designations, general requirements, technical requirements, test and inspection, determination and re-inspection rules, packaging, mark, quality certificate and content of order of grain non-oriented electrical steel strip (sheet) with the nominal thickness of 0.35 mm, 0.50 mm and 0.65 mm.

2 Normative References

The following documents are indispensable to the application of this Standard. In terms of references with a specified date, only versions with a specified date are applicable to this Standard. The latest version (including all the modifications) of references without a specified date is also applicable to this Standard.

3 Terms and Definitions

Those defined in GB/T 2900.60, GB/T 9637 and YB/T 4292, and the following terms and definitions are applicable to this Standard.

Transverse thickness tolerance refers to the thickness tolerance that is vertical to the rolling direction.

4 Classification

In this Part, the delivery conditions of steel strip (sheet) can be classified into two types. trimmed steel strip and untrimmed steel strip.

5 Symbols and Designations

Steel designation shall be constituted of the following sequence.

For example. 50W400 signifies cold-rolled grain non-oriented electrical steel under the nominal thickness of 0.50 mm and the maximum total loss ratio P1.5/50 of

6 General Requirements

Steel strip shall be delivered in coils; steel sheet shall be delivered in boxes. Please see the specific requirements below.

It shall be convenient to shear or stamp steel strip, which guarantees that steel strip can be sheared into a normal shape in any position. If the demand side has a special demand, the supply side and the demand side shall determine it through negotiation.

7 Technical Requirements

In accordance with the demand side's demand, and it shall be indicated in the content, the residual curvature of steel strip (sheet) whose width is more than 100 mm can be tested. The distance between the bottom margin of the tested steel sheet and the support plate shall not exceed 35 mm.

8 Test and Inspection

The sample for the test of the number of bends of steel strip (sheet) shall comply with the stipulation in A.1.