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

GB/T 34490-2017

Recycled sintered neodymium iron boron permanent magnets

再生烧结钕铁硼永磁材料

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard by the National Rare Earth Standardization Technical Committee (SAC/TC229) and focal point. This standard was drafted unit. Anhui Dadi Xiongxin Materials Co., Ltd., Beijing University of Technology, State Key Laboratory of rare earth permanent magnet materials, Beijing Zhong Ke San Huan High-tech Co., Ltd., Steel Research Institute, Baotou Rare Earth Research Institute. The main drafters of this standard. Yueming, Yi Xiaofei, Chen Jingwu, Huang Xiulian, Zhang Dongtao, Liu Weijiang, Xiong Yongfei, Liu Youhao, Xue Hui Li, Zhu Minggang, Liu Zheng. Regeneration sintered NdFeB permanent magnet materials

1 Scope

China's national standard for sintered neodymium iron boron permanent magnets made from recycled material. It specifies the selection and classification of the raw material, the classification and grades of the magnets, the requirements, the test methods, the inspection rules and the marking, packaging, transport and storage. Neodymium magnets are the strongest permanent magnets made, and they are in every hard disk, every electric vehicle traction motor, every wind turbine generator of the direct drive type and every set of earphones. Their rare earth content makes them strategically sensitive and their price volatile, and China produces the overwhelming majority of the world's supply. Recycling them is therefore worth doing, and it is unusually tractable: the magnets in a scrapped motor are the same alloy they were when new, and can be recovered, reprocessed and re-sintered without going back to ore. What such a magnet needs is a specification of its own, because a recycled feed brings a composition history that a virgin one does not.

This standard specifies the raw material selection and classification of regenerative sintered NdFeB permanent magnet materials, classification and brand of regenerative sintered NdFeB permanent magnet materials Number, requirements, test methods, inspection rules and signs, packaging, transportation, storage and quality certificates. This standard applies to powder metallurgy technology production of sintered NdFeB permanent magnet materials and products.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2828.1-2012 Sampling procedures for inspection - Part 1 - Batch-by-lot inspection by acceptance quality limit (AQL) plan

GB/T 3217 permanent magnet (hard magnetic) material magnetic test methods

GB/T 8170 rounded repair rules and limit values of the representation and judgment

GB/T 9637 Electrotechnical terminology magnetic materials and components

GB/T 15676 rare earth terminology XB/T 617.1 Methods for chemical analysis of neodymium iron boron alloys - Part 1. Determination of total rare earths Oxalate gravimetric method XB/T 617.2 Methods for chemical analysis of neodymium iron boron alloys - Part

2 Determination of the amount of fifteen rare earth elements Inductively coupled plasma Atomic emission spectrometry

3 Terms and definitions

GB/T 9637, GB/T 15676 and define the following terms and definitions apply to this document.

3.1 To waste sintered NdFeB permanent magnet material as the main raw material, after the provisions of the process of permanent magnet materials.

3.2 The main magnetic properties of principalmagneticproperties Mainly include residual magnetic induction intensity (Br), magnetic polarization coercivity (intrinsic coercivity) (HcJ), magnetic flux density Hardness (HcB), the maximum energy product [(BH) max].

3.3 Auxiliary magnetic properties additionalmagneticproperties Including the permanent magnet material relative permeability (μ_{rec}), the residual magnetic induction temperature coefficient [α (Br)], magnetic polarization coercivity Force (intrinsic coercivity) temperature coefficient [α (HcJ)], Curie temperature (TC). 4 raw material selection, classification and regeneration

4.1 raw material selection Recycled sintered NdFeB permanent magnet materials used in the preparation of used sintered NdFeB permanent magnet materials include two types of production is middle class