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

GB 29448-2022

Replacing GB 29136-2012

**The norm of energy consumption per unit production of sponge
titanium and titanium ingot**

海绵钛和钛锭单位产品能源消耗限额

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part

1. Structure and Drafting Rules for Standardization Documents" drafting. This document replaces GB 29136-2012 "Energy consumption limit per unit product of titanium sponge" and GB 29448-2012 "Titanium and titanium alloy casting Energy Consumption Quotas per Ingot Unit Product", compared with GB 29136-2012 and GB 29448-2012, except for structural adjustments and editorial changes. In addition, the main technical changes are as follows:

a) The physical unit consumption limit and production process energy consumption limit of titanium sponge production process are deleted (see

4.4 of GB 29136-2012 4.2);

b) The comprehensive energy consumption limit per unit product of titanium sponge has been changed (see Table 1, Table 3, Table 4, and Table 5 of GB 29136-2012);

c) The comprehensive energy consumption limit per unit product of titanium ingots has been changed (see Table 2, Table 1, Table 2, and Table 3 of GB 29448-2012). This document is proposed and managed by the National Standardization Management Committee. The release status of previous versions of this document and the documents it replaces are as follows:

---First published as GB 29448-2012 in 2012;

--- This is the first revision, which incorporated GB 29448-2012 "Energy Consumption Limits per Unit Product of Titanium and Titanium Alloy Ingots" during the revision "Amount" content. Energy consumption quota per unit product of titanium sponge and titanium ingot

1 Scope

GB 29448-2022 is the Chinese national standard on the norm of energy consumption per

unit production of sponge titanium and titanium ingot, in the field of energy and heat transfer engineering. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 29 December 2022 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2024. Classification: ICS 27.010, CCS F01. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document stipulates the limit of energy consumption per unit product (hereinafter referred to as "energy consumption") of sponge titanium, titanium and titanium alloy ingots (hereinafter referred to as "titanium ingots") Amount grades, technical requirements, statistical scope and calculation methods. This document is applicable to the calculation and consideration of energy consumption for enterprises producing sponge titanium by magnesium reduction distillation and vacuum consumable electric arc furnace for producing titanium ingots. Nuclear, and energy consumption control of new construction, renovation and expansion projects. This document is not applicable to the calculation and assessment of energy consumption by enterprises producing sponge titanium by electrolysis or by cooling bed furnaces to produce titanium ingots, and Energy consumption control for new construction, renovation and expansion projects.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document.

GB/T 2524 Titanium Sponge

GB/T 2589 General rules for comprehensive energy consumption calculation

GB/T 12723 General rules for the preparation of energy consumption quotas per unit of product

GB/T 26060 Titanium and titanium alloy ingots

3 Terms and Definitions

The terms and definitions defined in GB/T 2589 and GB/T 12723 apply to this document.

4 Energy consumption quota levels

4.1 The grades of energy consumption limit per unit product of titanium sponge are shown in Table 1, among which grade 1 has the lowest energy consumption. Table

1 Energy consumption limit level per unit product of titanium sponge The unit is kilogram standard coal per ton production type energy consumption quota level Level