

ICS 27.010
CCS F01



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

GB 30182-2013

**The norm of energy consumption per unit products of friction
materials**

摩擦材料单位产品能源消耗限额

Issued on: December 31, 2013

Implemented on: December 1, 2014

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

1 Scope
2 Normative references
3 Terms and Definitions
5.3 Calculation Method
6.2 Energy Saving Technology Management
6.2.1 Energy-consuming equipment
6.2.2 Production process
Appendix A

Foreword

4.2 of this standard are mandatory, the rest are recommended. This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard by the National Development and Reform Commission Resource Conservation and Environmental Protection, the Ministry of Industry and Information Technology Energy Saving and Comprehensive Utilization Department proposed. This standard by the National Standardization Technical Committee for Energy and Management (SAC/TC20) and China Building Materials Federation focal point. This standard was drafted. Shandong Gold Phoenix Group Co., Ltd., Hangzhou Xiaoshan red Friction Materials Co., Ltd., Fujian Huari Automobile Parts Co., Ltd., Hangzhou crown Yan Auto Parts Industry Co., Ltd. Hangzhou West Lake friction materials, non-metallic mineral research to the Xianyang Design Institute Co., Koa Zaoyang Friction Materials Co., Ltd. Hubei dragon Friction sealing materials, National Non-metallic mineral products Quality Supervision and Inspection Center. The main drafters of this standard. Shi Zhigang, Renzeng Mao, Lei Jianbin, HEZE, Sun Peng, Zhang Yinhua, Wang Guangxing, Sumei Zhen, source, Zhou Fang, Chen Yongsheng, Zhao Jinbao, Mayan Bing, Zhang Qiuping. Friction material of energy consumption per unit product

1 Scope

GB 30182-2013 is the Chinese national standard on the norm of energy consumption per unit products of friction materials, 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 31 December 2013 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 December 2014. 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 standard specifies the technical requirements for friction material unit product energy consumption (hereinafter referred to as energy) limit, the scope of statistical and computational methods, And energy management measures. This standard applies to calculate the energy consumption does not strip back (or shoe) molded type friction materials unit product energy consumption, and assessment of new projects control.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document. Heat

GB/T 213 Determination of coal

GB/T 384 Petroleum products - Determination of calorific value

GB/T 2589 General Principles of comprehensive energy consumption calculation

GB 5763 automobile brake linings

GB/T 5764 automobile clutch facings

GB/T 11834 and agricultural machinery friction plate

GB/T 12497 three-phase asynchronous motor economy

GB/T 12723 energy consumption per unit of product preparation General

GB/T 13462 Power Transformer Economic Operation

GB/T 13470 Ventilator System Economic Operation

GB/T 17954 Industrial Boiler economy

GB/T 17981 economic operation of the air conditioning system

GB 18613 small and medium three-phase asynchronous motor energy efficiency limit value and energy efficiency rating

3 Terms and Definitions

GB/T 12723 and defined by the following terms and definitions apply to this document.

3.1 Friction material products integrated energy

comprehensive energy consumption of friction material products And friction materials in the

production of the entire process of the reporting period, the actual production for a variety of total energy consumption.

3.2 Comprehensive energy consumption per unit of product friction material
comprehensive energy consumption per unit product of friction material products Friction material products to the comprehensive energy consumption per unit of production represented.

3.3 Friction materials unit product power consumption
electricity consumption per unit product of friction material products Friction materials per unit of output expressed in the direct consumption of electricity. 4. Technical Requirements

4.1 friction materials unit product energy consumption limits Existing manufacturers of friction materials unit energy consumption limit values shall conform to Table 1. Table 1 friction materials unit product energy consumption limits Comprehensive energy consumption per unit of product friction material friction material limited value limit power consumption per unit of product $\leq 175 \text{ kgce/t}$ $\leq 1300 \text{ kW} \cdot \text{h/t}$

4.2 Access friction materials unit product energy consumption value Friction materials unit energy consumption value access new enterprises (including new production lines) should meet the requirements of Table 2. Table 2 friction materials unit product energy consumption value access Access comprehensive energy consumption per unit of product value friction material friction materials unit product power consumption value access $\leq 135 \text{ kgce/t}$ $\leq 1000 \text{ kW} \cdot \text{h/t}$

4.3 advanced friction materials unit product energy consumption value Enterprises should be achieved advanced friction materials unit energy consumption through energy-saving technological transformation of values and strengthen energy conservation management, see Table 3. Table 3 advanced friction materials unit product energy consumption value Comprehensive energy consumption per unit of product friction material friction material values Advanced power consumption per unit of product advanced value $\leq 115 \text{ kgce/t}$ $\leq 800 \text{ kW} \cdot \text{h/t}$

5 statistical coverage and calculation methods

5.1 statistical range Including the preparation of material handling, weighing mixing, hot forming, heat treatment, grinding, marking, testing, packaging, transportation and other production processes, water supply, Heat, gas, oil, machine repair and other ancillary and subsidiary production systems and production management departments consumed fuel and electricity. Does not include mixing, processing and production of molds and tooling, facilities (such as. dormitories, schools, culture and entertainment, healthcare, business services and care Preschool children, etc.) and transportation, storage, heating, power equipment technological transformation projects such as the consumption of fuel and electricity, nor for the purpose of detecting Power 15kW more power consumed by power equipment.

5.2 Statistical Methods Use in line with GB/T 24851 requirements with energy consumption measuring instruments for the reporting period, the amount of power consumption and meet the GB 5763, GB/T 5764, GB/T 11834, SY/T 5023 qualified product yield statistics.

5.3 Calculation Method

5.3.1 Calculation of the comprehensive energy consumption shall comply with GB/T 2589's.

5.3.2 product overall energy consumption shall be the formula (1). $EZN = Ma \times QaDW + 29308 Mb \times 1.4286 \times QbDW + Mc \times 1.2143 \times QcDW + 35588 \times 0.1229 \times QZD$ (1) Where. EZN

--- comprehensive energy consumption in kilograms of standard coal (kgce); Ma

--- integrated coal consumption, in kilograms (kg); LHV QaDW

--- coal, in units of kilojoules per kilogram (kJ/kg); Mb

--- combined fuel consumption in kilograms (kg); LHV QbDW

--- oil, in units of kilojoules per kilogram (kJ/kg); Mc

--- Comprehensive gas consumption, in units of cubic meters (m³); LHV QcDW

--- gas, in units of kilojoules per kilogram (kJ/kg); QZD

--- products integrated power consumption, in units of kilowatt-hours (kW · h).

5.3.3 comprehensive energy consumption per unit of product shall formula (2). $EDN = EZN$ (2) Where. EDN

--- comprehensive energy consumption per unit of product, in kilograms per tonne of coal equivalent (kgce/t); P

--- in line with GB 5763, GB/T 5764, GB/T 11834, SY/T 5023 qualified product yield, tonnes (t).

5.3.4 integrated power consumption per unit of product shall formula (3) Calculated. $QDD = QZD$ (3) Where. QDD

6.2.1 Energy-consuming equipment

6.2.1.1 enterprises should make the motor system, ventilation system, power transformers, industrial boilers, electric heating boilers, air conditioning systems and other common Energy-consuming equipment in line with GB/T 12497, GB/T 13470, GB/T 13462, GB/T 17954, GB/T 19065 and GB/T 17981, etc. Energy-related goods economy standards and reached the state of the economy.

6.2.1.2 new and renovation and expansion of small and medium enterprises with a three-phase asynchronous motors, displacement air compressor, fan, three-phase power distribution transformer GM and other energy-consuming equipment should meet the GB