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

GB/T 12214-2019

Replacing GB/T 12214-1990

Silica sand and flour for investment casting

熔模铸造用硅砂、粉

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 12214-1990 "silica sand and powder for investment casting". This standard is mainly compared with GB/T 12214-1990. The technical content changes as follows:

- Revised the definition of silica sand and silica fume for investment casting (see 3.1, 3.2, 1990, 3.1, 3.2);
- Revised the classification table for silica sand and powder for investment casting (see Table 1 in 4.1, Table 1 in
- Revised the definition of sand fines content (see 3.3, 3.6 of the 1990 edition);
- Revised the detection method of fine powder content (see 6.3, 6.3 of 1990 edition);
- Removed the definition of weight average particle size, weight mean square error, and total surface area of 100 grams of powder (1990 version 3.3, 3.4, 3.5);
- Revised the partial code of the silica sand particle size (see Table 2 in 4.2.1, Table 2 in Table
- Revised the representation of silica sand grades (see 4.3, 4.3 of the 1990 edition);
- Increased the standard number and date of manufacture in the bag logo (see 8.2). This standard is proposed and managed by the National Foundry Standardization Technical Committee (SAC/TC54). This standard was drafted. First Tractor Co., Ltd., Dongying Jiayang Precision Metal Co., Ltd., Dongfeng Precision Casting Co., Ltd. Anhui Yingliu Hangyuan Power Technology Co., Ltd., Guizhou Anji Aviation Precision Casting Co., Ltd., Henan Jinnyuan New Material Technology Co., Ltd. Division, Zhengzhou Xiangyu Foundry

Materials Co., Ltd., Ningguo Huihong Wear Resistant Materials Co., Ltd., Shanghai Honggang Power Station Equipment Casting & Forging Co., Ltd., Shenyang Casting Research Institute Co., Ltd. The main drafters of this standard. Feng Zhiming, Guo Yahui, Wang Shijie, Wei Zhiyu, Ma Bo, Wang Yonghua, Lan Yong, Feng Yinping, Zhang Xin, Lu Lehua, Xu Hongli, Duan Jidong, Zhang Shengdong, Zhang Nianyu, Cheng Yuyong, Cao Jian, Zhang Shiming, Chen Qun, Cheng Nan, Kang Xiao, Zhu Jianyu, Song Aiwen, Wu Tieming, Xu Demin, Wang Ting. The previous versions of the standards replaced by this standard are.

---GB/T 12214-1990. Silica sand and powder for investment casting

1 Scope

GB/T 12214-2019 is the Chinese national standard on silica sand and flour for investment casting, in the field of construction materials and building. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 August 2019 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2020. Classification: ICS 91.100.15, CCS J31. 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 terms and definitions of silica sand and powder for investment casting, classification, grouping and grades, technical requirements, test methods, inspection rules. Then, packaging and storage. This standard applies to silica sand and powder for investment casting.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2684 casting sand and mixture test method

GB/T 5611 casting terminology

GB/T 7143 chemical analysis method for silica sand for foundry

GB/T 7322 refractory test method for refractory

3 Terms and definitions

The following terms and definitions as defined in GB/T 5611 apply to this document.

3.1 Investment casting with silica sand silicasandforinvestmentcasting Quartz (SiO_2) as the main mineral component, its SiO_2 content is not less than 96%, and the particle size is 0.075mm~3.350mm. Granules.

3.2 Silicon powder for investment casting silicaflourforinvestmentcasting Refractory particles with quartz (SiO_2) as the main mineral component, SiO_2 content of not less than 96%, and particle size below 0.075 mm.

3.3 Fine powder content The mass of particles in the silica sand having a particle size greater than or equal to 0.020 mm and less than 0.075 mm is a percentage of the total mass of the sand sample.

4 Classification, grouping and branding

4.1 Classification The silica sand and powder used for investment casting are classified into four grades according to the content of silica (SiO_2) and harmful impurities, as shown in Table 1. GB/T 12214-2019 (Silica sand and powder for investment casting) ICS

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