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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 21994.6-2008

Chemical analysis of magnesium fluoride - Part 6: Determination of silica content - Molybdenum blue photometric method

氟化镁化学分析方法 第6部分：二氧化硅含量的测定 钼蓝分光光度法

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Foreword

GB/T 21994 "Chemical analysis of magnesium fluoride" is divided into eight sections.

--- Part 1. Preparation and storage of test samples;

--- Part 2. Determination of the weight of water in the wet method;

--- Part 3. Determination of distillation of fluorine content - thorium nitrate volumetric method;

--- Part 4. Determination of magnesium content - EDTA volumetric method;

--- Part 5. Determination of calcium content by flame atomic absorption spectrometry;

--- Part 6. Determination of silicon dioxide content - Molybdenum blue spectrophotometric method;

--- Part 7. Determination of iron oxide content phenanthroline spectrophotometry;

--- Part 8. Determination of sulfate content of barium sulfate gravimetric method. Part is divided into 6 sections. This part is proposed by the China Nonferrous Metals Industry Association. The non-ferrous metal part by the National Standardization Technical Committee. This section is Hunan Nonferrous fluorine chemical limited liability company, China Nonferrous Metals Industry Institute of Standards Metrology and Quality is responsible for drafting. This section is drafted. Hunan Nonferrous fluorine chemical limited liability company. Participated in the drafting of this section. Fluoride Chemicals Co., Ltd., Silver fluoride limited liability company. The main drafters of this section. Li Zhijian, Liao Zhihui, Chen Xiang Yu, Zhu Liang, Xu Jin Xue, Wang Jianping, Guo Xianhui, Bo, Li Ye. Chemical analysis of magnesium fluoride Part 6. Determination of silica content Molybdenum blue spectrophotometric method

1 Scope

GB/T 21994.6-2008 is the Chinese national standard on chemical analysis of magnesium

fluoride - part 6: determination of silica content - molybdenum blue photometric method, in the field of metallurgy. 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 9 June 2008 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 2008. Classification: ICS 77.040.30, CCS H12. 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 section provides the determination of magnesium fluoride silica. This section applies to the determination of magnesium fluoride in silica. Measuring range. <=1.00%.

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this part. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this section, however, encourage the parties to this part of the research agreement Whether the latest versions of these documents. For undated references, the latest edition to adapt to this section.

GB/T 21994.1-2008 Chemical analysis of magnesium fluoride - Part 1. Sample Preparation and Storage

3 Method summary

Sample with sodium carbonate and boric acid flux melt, hydrochloric acid. Points to take the test solution between pH0.85 ~ pH0.90, silicon and molybdic acid Salt formation yellow silicon molybdenum heteropoly acid. In the high acidity sulfuric acid medium, the reducing agent is a Silicon molybdenum blue, in the spectrophotometer at a wavelength of 620nm Measuring the absorbance.

4 Reagents

4.1 anhydrous sodium carbonate.

4.3 hydrochloride (3mol/L).

4.4 ammonium molybdate solution (100g/L).

4.5 sulfate (1 + 1).

4.6 ascorbic acid solution (25g/L). When using the preparation.

4.7 silica standard stock solution. Weigh 0.5000g finely pre-burning 1h at 1000 °C, and cooled to room in the dryer Temperature silica (99.9%), placed in a platinum crucible, to which was added 5g of anhydrous sodium carbonate in the (4.1), mix well with a platinum spoon, set high Oven temperature at 950 °C carefully melted (about 10min), then cool, water was added to the crucible, heated slowly to dissolve completely. The solution was cooled CAUTION moved 1000mL volumetric flask, dilute to volume, and mix. Immediately poured into a polyethylene bottle. This solution 1mL containing 0.500mg two Silicon oxide.

4.8 silica standard solution. Pipette 50.00mL silica standard stock solution (4.7) in 500mL flask, diluted with water To the mark, and mix. Immediately transferred to plastic bottles. This solution 1mL containing 0.0500mg silica. The solution was formulated before use now.

5 Instruments and equipment

5.1 platinum dish. flat, diameter 70mm, height 35mm, with platinum cover.

5.2 EAF. to control the temperature at 550 °C ± 25 °C.

5.3 Furnace temperature. the temperature can be controlled at 850 °C ± 25 °C.

5.4 pH meter. with a glass electrode.