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

GB/T 6609.37-2009

**Alumina Chemical analysis methods and determination of
physical performance -- Part 37: Determination of particle size
less than 20 μ m particle content**

氧化铝化学分析方法和物理性能测定方法 第37部分：粒度小于20 μ m颗粒含量的
测定

(English Translation)

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Foreword

GB/T 6609 "alumina chemical analysis methods and determination of physical performance" is divided into 37 parts.

--- Part 1. Inductively coupled plasma atomic emission spectrometry Determination of trace elements;

--- Part 2. Determination of 300 °C and 1000 °C mass loss;

--- Part 3. molybdenum blue spectrophotometric determination of silicon dioxide content;

--- Part 4. phenanthroline spectrophotometric determination of ferric oxide content;

--- Part 5. Determination of sodium oxide content;

--- Part 6. flame photometric determination of potassium content;

--- Part 7. Determination of titanium dioxide content of the two safety for DAM spectrophotometry;

--- Part 8. diphenyl carbon acid dihydrazide spectrophotometric determination of chromium oxide content;

--- Part 9. neocuproine spectrophotometric determination of copper oxide content;

--- Part 10. benzoyl phenylhydroxylamine extraction spectrophotometric determination of the content of vanadium pentoxide;

--- Part 11. Flame atomic absorption spectrometric method for the determination of manganese oxide content;

--- Part 12. Flame Atomic Absorption Spectrometry Determination of zinc oxide content;

--- Part 13. Flame atomic absorption spectrometric method for the determination of calcium oxide content;

- Part 14. lanthanum - alizarin complex spectrophotometric determination of fluorine content;
- Part 15. Rhodanate spectrophotometric determination of chlorine content;
- Part 16. Determination of curcumin boron trioxide content;
- Part 17. molybdenum blue spectrophotometric determination of phosphorus pentoxide content;
- Part 18. N, N- dimethyl-p-phenylenediamine spectrophotometric determination of sulfate content;
- Part 19. Flame atomic absorption spectrometry determination of lithium oxide content;
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- Part 22. Sampling;
- Part 23. sample preparation and storage;
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- Part 27. Particle size analysis by sieving;
- Part 28. less than 60 μ m fine powder particle size distribution measuring wet screening;
- Part 29. Assay index;
- Part 30. Determination of trace elements X-ray fluorescence spectrometry;
- Part 31. Determination of flow angle;
- The first part 32. alpha- alumina Determination of X- ray diffraction method;
- Part 33. Determination of the abrasion index;
- Part 34. Calculation of the content of aluminum oxide;
- Part 35. specific surface area by nitrogen adsorption method;
- Part 36. Determination of the flow of time;
- Part 37. Determination of particle size less than 20 μ m particle content.

This is Part 37 GB/T 6609's.

The partial modification of the use of ISO 23202:2006 "for the production of aluminum

alumina --- less than 20 μ m particle content determination." the partial modification of the use of ISO 23202:2006, the preface to delete. While the normative reference document, respectively GB/T 6609.2 and GB/T 6609.23 instead of ISO 806:2004 and ISO 802. 1976. To facilitate comparison, listed in Appendix C this part of the clauses and the corresponding ISO 23202:2006 chapter of the table.

Appendix B to this part of the normative appendix, Appendix A and Appendix C are informative.

This part is proposed by the China Nonferrous Metals Industry Association.

The non-ferrous metal part by the National Standardization Technical Committee.

Drafting this Part. Aluminum Corporation of China Zhengzhou Research Institute, China Nonferrous Metals Industry Standards and Metrology Institute for Quality.

1 Scope

GB/T 6609 This section specifies the method by wet screening method for the determination of particle size less than 20 μ m alumina particle content.

This section applies to the determination of aluminum oxide content of the particles size of less than 20 μ m. Measuring range. $\leq 4\%$.

2 Normative references

The following documents contain provisions which, through reference to GB/T 6609 to the present, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 6609.2 alumina chemical analysis methods and determination of physical performance - Part 2. 300 °C and 1000 °C mass loss Determination (GB/T 6609.2-2009, ISO 806:2004, MOD) GB/T 6609.23 alumina preparation and storage of chemical analysis methods and determination of physical performance of the sample (GB/T 6609.23-2004, ISO 802. 1976, MOD)

--- ISO 3310-3 Test sieves - Technical requirements and testing - Part 3. Electric forming screen

3 PRINCIPLE OF THE METHOD

With acetone, the alumina samples were sieved through a 20 μ m sieve of electroforming, after 300 °C drying to calculate the content on the screen material.

4 Reagents

4.1

acetone. AR.

Note: Acetone is flammable, it should be used in the hood.

4.2

Desiccant. phosphorus pentoxide, molecular sieves or activated alumina applicable, silica NA.

Warning. phosphorus pentoxide is toxic and should involve the safety instructions on the duration of this substance.

4.3

ethanol. Industrial pure.

5 Instruments

Sieve 5.1. ISO 3310-3 meet the requirements of a sieve, having a diameter of 75mm ~ 150mm, a pore diameter of 20μm mesh sieve electroforming. hole A round of sieve material requires an appropriate grid to maintain sufficient strength. Sieve material shall meet from chemical attack, and in at 110 °C no mechanical damage. Grid should tightly strapped to the frame of the screen, in order to prevent the particles from the connection through.

Note: Normally there are two suitable mesh, # 317 and # 570, # 570 mesh aperture area of about 17% to # 317 3.5%, which sieve 570 # 317 # efficient but easier than the brittle fracture.

5.2

sieve brush. resistance to acetone, any paint on the brush should be cleaned.

Note 1: The stiff brush child is not applicable, it can lead to high results and damage the sieve.

Note 2: Black hair brush relatively easy to use, it can clearly be seen whether the brush is attached with aluminum oxide.

5.3

Oven. with air circulation can be controlled 300 °C ± 10 °C.