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The Specification for Limit on Harmful Element Content of the Heavy Nonferrous Metal Concentrates Products

重有色金属精矿产品中有害元素的限量规范

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The Specification for Limit on Harmful Element Content of the Heavy Nonferrous Metal Concentrates Products

1 Scope

This Document specifies the limit requirements, test methods and inspection rules for harmful elements contained in heavy non-ferrous metal concentrate products.

This Document applies to heavy non-ferrous metal concentrate products.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 1819.4 Methods for chemical analysis of tin concentrates - Determination of lead content - Flame atomic absorption spectrometric method and EDTA titrimetric method

GB/T 1819.5 Methods for chemical analysis of tin concentrates - Determination of arsenic content - The molybdoantimonyarsenate blue spectrophotometric method and the distillation-iodometric titration

GB/T 1819.17 Methods for chemical analysis of tin concentrates - Part 17: Determination of mercury content - Atomic fluorescence spectrometric method

GB/T 3884.5 Methods for chemical analysis of copper concentrates - Part 5: Determination of fluoride content - Ion selective electrode method

GB/T 3884.6 Methods for chemical analysis of copper concentrates - Part 6: Determination of lead, zinc, cadmium and nickel content - Flame atomic absorption spectrometry method

GB/T 3884.7 Methods for chemical analysis of copper concentrates - Part 7: Determination of lead content - Na_2EDTA titration method

GB/T 3884.9 Methods for chemical analysis of copper concentrates - Part 9: Determination of arsenic and bismuth contents - Hydride generation-atomic fluorescence spectrometry method - The potassium bromate titration method and the silver diethyl dithiocarbamate photometric method

GB/T 3884.11 Methods for chemical analysis of copper concentrates - Determination of mercury content - Cold atomic absorption spectrometric method

GB/T 8151.7 Methods for chemical analysis of zinc concentrates - Part 7: Determination of arsenic content - Hydride generation-atomic fluorescence spectrometry and the potassium bromate titrimetric method

GB/T 8151.8 Methods for chemical analysis of zinc concentrates - Part 8: Determination of cadmium content - The flame atomic absorption spectrometric method

GB/T 8151.15 Methods for chemical analysis of zinc concentrates - Determination of mercury content - Atomic fluorescence spectrometry method

GB/T 8151.21 Methods for chemical analysis of zinc concentrates - Part 21: Determination of thallium content - Inductively coupled plasma mass spectrometry and inductively coupled plasma-atomic emission spectrometry

GB/T 8152.5 Methods for chemical analysis of lead concentrates - Determination of arsenic content - Atomic fluorescence spectrometer method

GB/T 8152.11 Methods for chemical analysis of lead concentrates - Part 11: Determination of mercury content - Atomic fluorescence spectrometry and direct mercury determining with solid injection method

GB/T 8152.12 Methods for chemical analysis of lead concentrates - Determination of cadmium content - Flame atomic absorption spectrometric method

GB/T 8152.13 Methods for chemical analysis of lead concentrates - Part 13: Determination of thallium content - Inductively coupled plasma mass spectrometry and inductively coupled plasma-atomic emission spectrometry

YS/T 301 Cobalt concentrate

YS/T 318 Copper concentrate

YS/T 319 Lead concentrate

YS/T 320 Zinc concentrate

YS/T 339 Tin concentrate

YS/T 340 Nickel concentrate

YS/T 385 Antimony concentrate

YS/T 452 Lead and zinc bulk concentrate

YS/T 461.4 Methods for chemical analysis of lead and zinc bulk concentrates - Part 4:

Determination of arsenic content Iodimetricic method and atomic fluorescence spectrometry

YS/T 461.6 Methods for chemical analysis of lead zinc bulk concentrates - Part 6: Determination of mercury content - Atomic fluorescence spectrometry and direct mercury analysis with solid injection method

YS/T 461.7 Methods for Chemical Analysis of Lead and Zinc Bulk Concentrates - Part 7: The Determination of Cadmium Content - Flame Atomic Absorption Spectrometry

YS/T 461.12 Methods for chemical analysis of lead and zinc bulk concentrates - Part 12: Determination of thallium content - Inductively coupled plasma mass spectrometry and inductively coupled plasma atomic emission spectrometry

YS/T 472 (all parts) Methods for chemical analysis of nickel concentrates and cobalt sulfide concentrates

YS/T 556.2 Methods for chemical analysis of antimony concentrates - Part 2: Determination of arsenic content - Potassium bromate titration method

YS/T 556.7 Methods for chemical analysis of antimony concentrates - Part 7: Determination of mercury content - Atomic fluorescence spectrometry

YS/T 556.11 Methods for chemical analysis of antimony concentrates - Part 11: Determination of cadmium content - Flame atomic absorption spectrometric method

3 Terms and Definitions

For the purposes of this Document, the following terms and definitions apply.

3.1 Heavy nonferrous metal concentrates products

A general term for heavy metal concentrates in nonferrous metals.

NOTE: It generally includes copper concentrate, lead concentrate, zinc concentrate, lead and zinc bulk concentrate, tin concentrate, nickel concentrate, cobalt concentrate, antimony concentrate, etc.

3.2 Harmful element

Elements that are obviously toxic to humans and pollute the environment.

NOTE: Such as lead, mercury, cadmium, arsenic, thallium, fluorine, etc.

3.3 Copper concentrate

A concentrate product for copper smelting with a copper content of no less than 13% obtained by flotation or other methods of beneficiation of copper-containing ore.

3.4 Lead concentrate

A concentrate product for lead smelting with a lead content of no less than 40% obtained by flotation or other methods of beneficiation of lead-containing ore.

3.5 Zinc concentrate

A concentrate product for zinc smelting with a zinc content of no less than 40% obtained by flotation or other methods of beneficiation of zinc-containing ore.

3.6 Lead and zinc bulk concentrate

A concentrate product for smelting lead and zinc simultaneously with a lead content of no less than 14%, a zinc content of no less than 28%, total lead and zinc content of no less than 45%, and a particle size of no more than 0.1mm, obtained by flotation or other methods of beneficiation of lead-zinc-containing ore.

3.7 Tin concentrate

A concentrate product for smelting tin with a tin content of no less than 40%, thereof the tin content is no more than 30% for the particle size of no more than 3mm and less than 0.074mm, obtained by flotation or other methods of beneficiation of tin-containing ore.

3.8 Nickel concentrate

A concentrate product for smelting nickel with a nickel content of no less than 5.0%, thereof the nickel content is no less than 80% for the particle size of less than 0.074mm, obtained by flotation or other methods of beneficiation of nickel-containing ore.

3.9 Cobalt concentrate

A concentrate product for smelting cobalt with a cobalt content of no less than 5.0%, and with the particle size of no more than 0.175mm, obtained by flotation or other methods of beneficiation of cobalt-containing ore.

3.10 Antimony concentrate

A concentrate product for smelting antimony with an antimony content of no less than 20%, thereof the antimony content is more than 60% for the particle size of less than 0.074mm, with the block concentrate particle size within the range of 25mm~150mm, obtained by flotation or other methods of beneficiation of antimony-containing ore.

4 Limit Requirements

4.1 Copper concentrate

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