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**Methods for chemical analysis of tungsten concentrates - Part
20: Determination of mercury content - Solid sampling and
direct mercury analysis method**

钨精矿化学分析方法 第20部分：汞含量的测定 固体进样直接测定法

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document is part 20 of GB/T 6150 Chemical analysis methods for tungsten concentrates. GB/T 6150 has published the following parts.

Part 1: Determination of tungsten trioxide content - Gravimetric method on ignition of ammonium tungstate;

Part 2: Determination of tin content - Potassium iodate titration and inductively coupled plasma atomic emission spectrometry;

Part 3: Determination of phosphorus content - Phosphomolybdenum yellow spectrophotometric method and inductively coupled plasma atomic emission spectrometric method;

Part 4: Determination of sulfur content - High frequency induction infrared absorption method and combustion-iodine titration method;

Determination of calcium content EDTA volumetric method and flame atomic absorption spectrometry (GB/T 6150.5); - Part 6: Gravimetric method for determination of moisture content;

Determination of tantalum and niobium content - Plasma emission spectrometry and spectrophotometry (GB/T 6150.7); - Part 8: Determination of molybdenum content - Thiocyanate spectrophotometric method; - Determination of copper content-Flame atomic absorption spectrometry (GB/T 6150.9);

Part 10. Determination of lead content by hydride generation atomic fluorescence spectrometry and flame atomic absorption spectrometry;

Determination of zinc content-Flame atomic absorption spectrometry (GB/T 6150.11);

Part 12. Determination of silicon dioxide content - Silica molybdenum blue spectrophotometric method and gravimetric method;

Part 13. Determination of arsenic content by atomic fluorescence spectrometry and DDTC-Ag spectrophotometry;

Determination of manganese content-Ammonium ferrous sulfate volumetric method and flame atomic absorption spectrometry (GB/T 6150.14);

Part 15. Determination of bismuth content - Hydride generation atomic fluorescence spectrometry and flame atomic absorption spectrometry;

Determination of iron content-Sulfosalicylic acid spectrophotometric method (GB/T 6150.16);

Part 17. Determination of antimony content - Atomic fluorescence spectrometry;

Part 18. Determination of barium content - Inductively coupled plasma atomic emission spectrometry;

Part 19. Determination of fluoride content - Ion selective electrode method; - Part 20. Determination of mercury content - Direct determination by solid injection. - Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by China Nonferrous Metals Industry Association.

This document is under the jurisdiction of the National Technical Committee on

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Introduction

Tungsten concentrate is an important strategic resource. Tungsten and tungsten alloys produced with it as an important industrial raw material have high melting point and high specific gravity.

With the characteristics of heavy weight and high hardness, it is widely used in mechanical processing, metallurgy, mining, electronic telecommunications, construction industry, weapons industry, aerospace, etc.

GB/T 6150 aims to establish a complete, feasible and applicable set of tungsten concentrate product production and trade requirements through experimental research.

Chemical composition analysis method standards. Due to the length of the document, usage requirements, scope of application, and technical independence between various analytical methods, For various reasons, GB/T 6150 is planned to consist of 20 parts.

Part 1: Determination of tungsten trioxide content. The purpose is to establish a method for determining the tungsten trioxide content in tungsten concentrate by gravimetric method.

Part 2: Determination of tin content. The purpose is to establish a titration method and inductively coupled plasma atomic emission spectrometry to determine the content of tungsten Method for determining the tin content in ores.

Part 3: Determination of phosphorus content. The purpose is to establish a spectrophotometric method and an inductively coupled plasma atomic emission spectrometric method for the determination of phosphorus content.

Method for determining phosphorus content in tungsten concentrate.

Part 4: Determination of sulfur content. The purpose is to establish a high frequency infrared absorption method and iodine titration method for determining sulfur content in

tungsten concentrate. method.

Part 5: Determination of calcium content. The purpose is to establish a method for determining the calcium content in tungsten concentrate by volumetric method and atomic absorption spectrometry.

Part 6: Determination of wet water content. The purpose is to establish a gravimetric method for determining the wet water content in tungsten concentrate.

Part 7: Determination of tantalum and niobium content. The purpose is to establish an inductively coupled plasma emission spectrometry and spectrophotometry method for the determination of tungsten Method for determining the content of tantalum and niobium in ores.

Part 8: Determination of molybdenum content. The purpose is to establish a method for the spectrophotometric determination of molybdenum content in tungsten concentrate.

Part 9: Determination of copper content. The purpose is to establish a method for determining the copper content in tungsten concentrate by flame atomic absorption spectrometry.

Part 10: Determination of lead content. The purpose is to establish the determination of lead content in tungsten concentrate by atomic fluorescence spectrometry and flame atomic absorption spectrometry. Lead content method.

Part 11: Determination of zinc content. The purpose is to establish a method for determining the zinc content in tungsten concentrate by flame atomic absorption spectrometry.

Part 12: Determination of silicon dioxide content. The purpose is to establish a spectrophotometric and gravimetric method for the determination of silicon dioxide content in tungsten concentrate. Quantitative method.

Part 13: Determination of arsenic content. The purpose is to establish the determination of arsenic content in tungsten concentrate by atomic fluorescence spectrometry and spectrophotometry. method.

Part 14: Determination of manganese content. The purpose is to establish the determination of manganese content in tungsten concentrate by volumetric method and flame atomic absorption spectrometry. method.

Part 15: Determination of bismuth content. The purpose is to establish atomic fluorescence spectrometry and flame atomic absorption spectrometry for the determination of bismuth in tungsten concentrate. Bismuth content method.

Part 16: Determination of iron content. The purpose is to establish a spectrophotometric method for the determination of iron content in tungsten concentrate.

Part 17: Determination of antimony content. The purpose is to establish a method for