ICS 77.120.01
CCS H 01

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 42915-2023

Specification for the identification of copper concentrates and main copper-bearing materials

铜精矿及主要含铜物料鉴别规范

Issued on: August 6, 2023 **Implemented on: March 1, 2024**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

Table of Contents

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents" Drafting. Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed by the China Nonferrous Metals Industry Association. This document is under the jurisdiction of the National Nonferrous Metals Standardization Technical Committee (SAC/TC243). This document was drafted by: Nanning Customs Technology Center, Fangcheng Customs Comprehensive Technical Service Center, China Academy of Environmental Sciences, Shenzhen Customs Industrial Product Inspection Technology Center, Qingdao Customs Technology Center, Qingdao University of Technology, Guangxi Jinchuan Nonferrous Metals Co., Ltd., Minmetals Nonferrous Metals Stock Co., Ltd., Tongling Nonferrous Metals Group Co., Ltd., Beikang Testing Technology Co., Ltd., Kunming Metallurgical Research Institute Co., Ltd., Guangzhou Customs Technology Center, Nanjing Customs Industrial Product Testing Center, Shanghai Customs Industrial Products and Raw Materials Testing Technology Center, Ningbo Customs Technology Technology Center, Xiamen Customs Technology Center, Jiangxi Copper Co., Ltd., Daye Nonferrous Metals Co., Ltd., Shanxi North Copper Co., Ltd. Company, Yunnan Copper Co., Ltd., Baiyin Nonferrous Metals Group Co., Ltd., and Zijin Mining Group Co., Ltd. The main drafters of this document. Tang Mengqi, Lu Chunqiu, Liao Minping, Zhou Bingyan, Yu Hongjin, Ruan Guiwu, Zhong Jianhai, Zhang Qingjian, Yu Shuyuan, Guo Bing, Yang Jingli, Shi Quan, Qian Qingchang, Yu Li, Zhao Hui, Xiao Qian, Chen Lu, Xiao Dahui, Feng Yahui, Wu Qianhua, Zheng Jianming, Zhu Zhixiu, Chen Hehai, Feng Junli, Dong Qingmu, Hong Tiyu, Xu Jun, Zhang Pengzhou, Ye Zhengxiong, Li Jing, Zheng Wenying, Xu Jian, Cai Chuangkai. Specification for identification of copper concentrates and main copper-containing materials

1 Scope

China's national specification for identifying copper concentrates and the main copper-bearing materials. China imports more copper concentrate and secondary copper

material than any other country, and the identification question at the border is both technical and regulatory. Technically, the distinction between a concentrate, a copper-bearing residue, a slag and a waste determines how the material is valued and what a smelter can do with it. Regulatorily, it determines whether the material may be imported at all: China's restrictions on importing waste have progressively excluded low-grade material, and the boundary between a resource and a waste is drawn by exactly the characteristics this specification defines. That makes it a customs instrument as much as a metallurgical one, and it is why the identification characteristics and procedure are specified rather than left to assay alone.

This document stipulates the identification characteristics, identification process, identification implementation and identification report preparation of copper concentrates and main copper-containing materials. This document is applicable to the identification of imported copper concentrates and main copper-containing materials. The main copper-containing materials include matte, copper pyrolysis smelting slag, copper pyrolysis smelting slag, and copper pyrolysis smelting slag. Smelting smoke, copper anode mud, copper slag concentrate and other materials generated by copper pyrometallurgy smelting process.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document.

GB/T 2007.1 General rules for sampling and preparation of bulk mineral products, manual sampling methods

GB/T 2007.2 General principles for sampling and preparation of bulk mineral products, manual sample preparation methods

GB/T 2007.6 General principles for sampling and preparation of bulk mineral products Moisture determination method Thermal drying method

GB/T 2007.7 General Particle Size Determination Method for Sampling and Preparation of Bulk Mineral Products - Manual Screening Method

GB/T 3884 (all parts) Chemical analysis methods for copper concentrates

GB/T 14263 Sampling and preparation methods for bulk flotation copper concentrate

GB/T 16597 General principles for analysis of metallurgical products by X-ray fluorescence spectrometry

GB/T 17359 Microbeam analysis energy spectrometry quantitative analysis

GB/T 19077 Laser diffraction method for particle size analysis

GB/T 20424-2006 Limit specifications for harmful elements in heavy metal concentrate products

GB/T 30904 X-ray diffraction method for crystal structure analysis of inorganic chemical products DZ/T 0275.4 Technical Specifications for Rock and Mineral Identification Part

4.Rock Thin Section Identification DZ/T 0275.5 Technical Specifications for Rock and Mineral Identification Part

5.Ore Light Film Identification JY/T 0569 General principles for wavelength dispersive X-ray fluorescence spectroscopy analysis methods JY/T 0587 General rules for polycrystalline X-ray diffraction methods YS/T

3 Terms and definitions

The terms and definitions defined in GB/T 20424-2006 and the following apply to this document.

3.1 copper concentratecopperconcentrate Concentrate products for copper smelting obtained by flotation or other methods of beneficiation of copper-containing ores.