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

GB/T 47193-2026

**Technical specification for the application of steel slag as
backfill in mine rehabilitation**

矿山修复回填料用钢渣应用技术规范

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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 involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Iron and Steel Association. This document is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183). This document was drafted by: China Metallurgical Construction Research Institute Co., Ltd., Beijing University of Science and Technology, China ENFI Engineering Technology Co., Ltd., and Zhongtian Steel. China Railway Group Co., Ltd., Rizhao Iron & Steel Holding Group Co., Ltd., Ansteel Green Resources Technology Co., Ltd., and China Metallurgical Energy Conservation & Environmental Protection Co., Ltd. Company, Shougang Jingtang Iron & Steel Co., Ltd., China Steel Group Maanshan Mining Research Institute Co., Ltd., Baogang Group Mining Research Institute (Limited Liability Company), Beijing Beike Yian New Materials Technology Co., Ltd., Baowu Group Environmental Resources Technology Co., Ltd., MCC Changtianguo International Engineering Co., Ltd., Jiangxi Copper Group Yinshan Mining Co., Ltd., Metallurgical Industry Information and Standardization Research Institute, Beijing Jianlong Heavy Industry Group Limited, Jiangsu Binxin Steel Group Co., Ltd., China University of Geosciences (Beijing), Heilongjiang Jianlong Steel Co., Ltd., Tianjin City Jian University, Guizhou Lvhuang Technology Testing Co., Ltd., Solid Waste and Chemicals Management Technology Center of the Ministry of Ecology and Environment, and China Metallurgical Heavy Industry (Tangshan) Co., Ltd. Limited Liability Company, Qingdao University of Technology, Yipu Environmental Protection Service Co., Ltd., Northern Mining Co., Ltd., Baosteel Zhanjiang Iron & Steel Co., Ltd. The main drafters of this document are. Yue Changsheng, Xia Chun, Li Yunyun, Peng D, Wang Haitao, Qiu Jinhui, Lu Guanghua, Li Hongpeng, An Dengfei, and Shi Shihu. Huang Yilin, Hua Shaoguang, Wu Zeping, Wang Guochuan, Wu Dan, Qiu Guibo, Lü Wen, Zhu Xiaohua, Zhang Jianhua, Liu Changbo, Ni Wen, Wen Zhenjiang, Xi Yongqiang, Zhang Siqi, Li Yi, Li Xiangmei, Zhu Guangdong, Cheng Zhengming, Li Shuqin, Zhou Rui, Wu Xiaowen, Yang Bentao, Duan Wenquan, Wang Tongbin, Wang Fei, Lin Tao Fu Pingfeng, Wang Yu, Li Honghong, Wu Jie, Zhang Ruopeng,

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1 Scope

GB/T 47193-2026 is the Chinese national standard covering filling worked-out mine voids with steel slag - a use for a material produced in enormous quantity, provided its expansion has stopped and its leachate will not reach the groundwater. First edition, in force since 1 September 2026, and it depends on the stability test GB/T 24175-2026 revised in the same period. It was issued on 27 February 2026 and has been in force since 1 September 2026, as a first edition. The document is under the responsibility of the China Iron and Steel Association. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the basic requirements, work procedures, open-pit mine site selection requirements, mine baseline survey, and steel slag for mine restoration and backfilling. Slag sampling and performance requirements, environmental risk assessment, pollution prevention and control requirements, backfilling operation requirements, environmental quality monitoring and record keeping and post-construction management Require. This document applies to the backfilling of open-pit mines using steel slag.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated references are provided. For this document, only the version corresponding to the specified date applies; for undated references, the latest version (including all amendments) applies. In this document.

GB 8978 Integrated Wastewater Discharge Standard

GB/T 14848 Groundwater Quality Standard

GB 16297 Integrated Emission Standard for Air Pollutants

GB/T 17643 Geosynthetics - Polyethylene Geomembrane

GB 18599 Standard for Pollution Control of General Industrial Solid Waste Storage and

Landfill

GB/T 28294 Steel Slag Composite Material

GB 36600 Soil Environmental Quality Standard for Risk Control of Soil Pollution in Construction Land (Trial) DZ/T 0282 Specification for Hydrogeological Investigation (1.50000) HJ/T

20 Technical Specification for Sampling and Sample Preparation of Industrial Solid Waste HJ

25.1 Technical Guidelines for Soil Pollution Status Investigation of Construction Land HJ

25.3 Technical Guidelines for Soil Pollution Risk Assessment of Construction Land

HJ557 Solid Waste Leaching Toxicity Leaching Method. Horizontal Oscillation Method

HJ761 Determination of Organic Matter in Solid Waste by Loss on Ignition Method

HJ819 General Principles of Technical Guidelines for Self-Monitoring by Wastewater Discharge Units

3 Terms and Definitions

The terms and definitions defined in YB/T 804 and the following terms and definitions apply to this document.

3.1 open-pit mine The goaf formed after open-pit mining.

3.2 backfilling In projects such as land reclamation, landscape restoration, land leveling, and stabilization of exposed mining slopes, general industrial solid waste is used to replace sand, soil, and stone.