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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 28292-2026

Replacing GB/T 28292-2012

Technical specification for recycling and utilization of Fe-bearing dusts and sludges in the iron and steel industry

钢铁工业含铁尘泥回收及利用技术规范

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Foreword

This document was issued on 30 July 2026 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 February 2027.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies.

It is classified under ICS 77.140.99 and Chinese classification H 34.

The document runs to 15 pages. The identification, the dates, the classification and the table of contents on this page are taken from the cover and the printed contents of the standard itself.

This document was drafted in accordance with GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces GB/T 28292-2012 "Technical specification for recycling and utilization of Fe-bearing dusts and sludges in the iron and steel industry". Compared with the 2012 edition, apart from structural adjustments and editorial changes, the main technical changes are as follows:

a) the classification by zinc (Zn) content has been changed (see 4.3; 4.2 of the 2012 edition);

b) a classification by acid-soluble matter and by oil content has been added (see 4.6).

1 Scope

GB/T 28292 is the Chinese technical specification for recovering and using the iron-bearing dusts and sludges an integrated steelworks produces. Every stage of the process, from raw material preparation through sintering, pelletising, ironmaking, steelmaking and rolling, throws off dust into a bag filter or sludge into a thickener, and the total is measured in tens of kilogrammes per tonne of steel. That material is 30 % to 60 % iron and worth recovering; what stops it going straight back to the sinter strand is the zinc, the alkali and the oil it carries, which is why the standard classifies the material before it says what to do with it. The document sets the classification, the recycling and utilization technical routes, the recovery technologies, the utilization technologies and the environmental protection requirements, and it applies to the dusts, sludges and millscale generated across the whole works. The 2026 edition replaces GB/T 28292-2012, revising the classification by zinc content and adding a classification by acid-soluble matter and by oil content, the two properties that decide whether the material can be recycled internally or has to be treated.

2 Normative references

The contents of the following documents constitute indispensable provisions of this document through normative reference in the text. For dated references, only the edition corresponding to that date applies. For undated references, the latest edition, including all amendments, applies.

GB/T 6730.2, GB/T 6730.49 and GB/T 6730.78 Iron ores - Determination of moisture, of potassium and of cadmium content.

GB 9078 Emission standard of air pollutants for industrial kiln and furnace; GB 12348 Emission standard for industrial enterprises noise at boundary; GB 13456 Discharge standard of water pollutants for the iron and steel industry; GB 16297 Integrated emission standard of air pollutants.

GB 18597, GB 18598 and GB 18599 Standards for pollution control on hazardous waste storage, on hazardous waste landfill and on non-hazardous industrial solid waste storage and landfill.

GB/T 16555 Methods for chemical analysis of refractories containing carbon, silicon carbide and nitride; GB/T 23948 Inorganic chemical products - General method for the determination of water-insoluble matter.

HJ/T 426 to HJ/T 428 Cleaner production standards for the iron and steel industry; HJ 465 Guideline on environmental protection for the development of a circular economy in the iron and steel industry; HJ 637 Water quality - Determination of petroleum oils and animal and vegetable oils.

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Fe-bearing dust and sludge: the iron-bearing solid waste produced by an iron and steel enterprise through dry dust collection, wet dust collection and wastewater treatment in the stages of raw material preparation, sintering, pelletising, ironmaking, steelmaking and rolling. Note: it does not include the dusts and sludges from metallurgical auxiliary materials, from fuels, or from the processing of special ores.

3.2 converter dust and sludge: the solid waste collected by the wet or dry dust collection system in the course of converter steelmaking. Note: it includes converter wet dedusting sludge (OG sludge) and converter dry dedusting dust.

3.3 millscale: the iron oxide scale formed on the surface of the steel during hot working and removed in the rolling mill.