



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

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**Code for design of environment protection engineering of
nonferrous metals industry**

有色金属工业环境保护工程设计规范

(English Translation)

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Foreword

This code was prepared by China Nerin Engineering Co., Ltd. jointly with China ENFI Engineering Co., Ltd., Shenyang Aluminum and Magnesium Engineering and Research Institute Co., Ltd. and China Nonferrous Metals Processing Technology Co., Ltd., according to the requirements of the "Notice on Printing and Distributing the Plan for the Formulation and Revision of Engineering Construction Standards and Codes in 2010 (First Batch)" (Jianbiao [2010] No. 43) issued by the Ministry of Housing and Urban-Rural Development.

During the preparation of this code, the drafting group carried out extensive and in-depth investigation and research, summarized the recent practical experience in the development of the nonferrous metals industry, drew on advanced production processes and environmental protection technologies, and, on the basis of widely soliciting opinions, finally finalized the code after examination.

This code consists of 8 chapters and 4 appendices, and the main contents include: general provisions, terms, basic requirements, prevention and control of air pollution, prevention and control of water pollution, prevention and control of solid waste pollution, prevention and control of noise pollution, environmental monitoring, etc.

The provisions printed in bold type in this code are mandatory provisions and shall be strictly implemented.

The Ministry of Housing and Urban-Rural Development is in charge of the administration of this code and the interpretation of the mandatory provisions, the Administration Office of Engineering Construction Standards of the China Nonferrous Metals Industry is responsible for the routine management, and China Nerin Engineering Co., Ltd. is responsible for the explanation of the specific technical contents. During the implementation of this code, all organizations are requested to pay attention to summarizing experience and accumulating data, and may at any time feed back comments and suggestions to China Nerin Engineering Co., Ltd. (address: No. 888 Qianhu Avenue, Nanchang, Jiangxi Province; postcode: 330031; fax: 0791-86757985) for reference in future revision.

Chief development organization: China Nerin Engineering Co., Ltd.

Participating development organizations: China ENFI Engineering Co., Ltd.; Shenyang Aluminum and Magnesium Engineering and Research Institute Co., Ltd.; China Nonferrous Metals Processing Technology Co., Ltd.

1 General provisions

1.0.1

This code is formulated with a view to promoting the comprehensive utilization of resources and cleaner production in the nonferrous metals industry, preventing environmental pollution, and ensuring and improving the quality of environmental protection engineering design and the level of pollution control.

1.0.2

This code is applicable to the design of environmental protection engineering for new, reconstructed and expanded projects of the nonferrous metals industry. This code is not applicable to the design of radioactive pollution control engineering for nonferrous metal mineral development and utilization projects associated with natural uranium and thorium in which the specific activity of a single radionuclide in the crude ore, concentrate or tailings is greater than 1 Bq/g.

1.0.3

The design of environmental protection engineering shall adhere to the principles of cleaner production, circular economy, pollution prevention and control, total quantity control and ecological protection.

1.0.4

Environmental protection engineering of the nonferrous metals industry must be designed simultaneously with the principal part of the project.

1.0.5

The design of environmental protection engineering of the nonferrous metals industry shall comply not only with this code but also with the provisions of the relevant current national standards.

2.0.1 design of environmental protection engineering

The design of the various environmental protection works carried out in the design of construction projects of the nonferrous metals industry, including the design of works for air pollution prevention and control, water pollution prevention and control, treatment, disposal and recycling of solid waste, noise pollution prevention and control, ecological environment protection, remediation of contaminated sites, environmental monitoring facilities, etc.

2.0.2 smelting of heavy nonferrous metals

In this code, specifically refers to the smelting of copper, lead, zinc, nickel, tin, antimony, mercury, cobalt and other metals.

2.0.3 smelting of light metal

In this code, specifically refers to the smelting of the three metals aluminium, magnesium and titanium.

2.0.4 preparation of semiconductor material

In this code, specifically refers to the preparation of semiconductor materials such as silicon, germanium and gallium.

2.0.5 preparation of rare metals and products

In this code, specifically refers to the preparation of lithium, beryllium, tungsten, molybdenum, zirconium, hafnium, tantalum, niobium, rare earth metals and their products.

2.0.6 processing of heavy nonferrous metals

In this code, specifically refers to the production process in which metals such as copper and zinc, or copper alloys, etc., are cast and processed into sections, plates, strips, foils, bars, tubes, wires, etc.

2.0.7 processing of hard alloy

In this code, specifically refers to the production process of powder metallurgy products in which micron-sized powders of carbides of high-hardness refractory metals (tungsten carbide WC, titanium carbide TiC) are the main component, with cobalt (Co) or nickel (Ni) or molybdenum (Mo) as the binder, sintered in a vacuum furnace or a hydrogen reduction furnace.

2.0.8 processing of light metal

In this code, specifically refers to the production process in which alloys of metals such as aluminium, magnesium and titanium are cast and processed into sections, plates, strips, foils, bars, tubes, wires, etc.

2.0.9 regeneration of heavy non-ferrous metal

In this code, specifically refers to the process of producing copper and copper alloys from copper scrap by pretreatment, smelting and other processes.