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Cleaner production standard. Lead smelting industry

清洁生产标准 粗铅冶炼业

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5 Sulfur dioxide conversion rate /% low concentration of oxygen

7 Comprehensive energy consumption per unit of product (equivalent to standard coal)

Foreword

To implement the "Environmental Protection Law of the People's Republic of China" and the "Clean Production Promotion Law of the People's Republic of China", protect the environment, and lead Refining industrial enterprises provide technical support and guidance for clean production, and develop this standard.

This standard stipulates that on the basis of meeting national and local pollutant discharge standards, according to current industry technology, equipment level and management water General requirements for cleaner production in flat and crude lead smelting enterprises. This standard is divided into three levels, one level represents the international advanced level of cleaner production, two Representing the advanced level of domestic clean production, the third level represents the basic level of domestic clean production. With the continuous advancement and development of technology, this standard will Revise timely.

This standard is the first release.

This standard was formulated by the Science and Technology Standards Department of the Ministry of Environmental Protection.

This standard was drafted. Changsha Nonferrous Metallurgy Design and Research Institute, China Academy of Environmental Sciences.

This standard was approved by the Ministry of Environmental Protection on November 13, 2009.

This standard has been implemented since February 1, 2010.

This standard is interpreted by the Ministry of Environmental Protection.

Clean production standard rough lead smelting industry

1 Scope of application

This standard specifies the general requirements for cleaner production in rough lead smelting enterprises. This standard divides the clean production indicators of the crude lead smelting industry into six categories.

That is, production process and equipment requirements, resource and energy utilization indicators, product indicators, pollutant production indicators (before end treatment), waste recycling Use indicators and environmental management requirements.

This standard applies to the clean production audit of crude lead smelting production enterprises, the judgment of clean production potential and opportunity, and the performance of cleaner production.

The assessment and clean production performance announcement system is also applicable to environmental management systems such as environmental impact assessment and discharge permits.

2 Normative references

The terms in the following documents become the terms of this standard by reference to this standard. Valid versions of undated references Applicable to this standard.

GB/T 2589 General rules for comprehensive energy consumption calculation GB/T 16157-1996 Determination of particulate matter in fixed pollution source exhaust gas and sampling method of gaseous pollutants GB/T 24001 Environmental Management System Requirements and User Guide HJ/T 56-2000 Determination of sulphur dioxide in fixed source s HJ/T 57-2000 Determination of sulfur dioxide in fixed source exhaust gases HJ/T 425-2008 Technical Guidelines for the Development of Cleaner Production Standards "Guidelines for Access to Lead and Zinc Industry" (National Development and Reform Commission Announcement No. 13 of 2007) Interim Measures for Clean Production Audit (National Development and Reform Commission, State Environmental Protection Administration Order No. 16)

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1 Cleaner production cleaner production

Refers to continuous improvement of design, use of clean energy and raw materials, adoption of advanced process technology and equipment, improvement of management, and comprehensive utilization and other measures to reduce pollution from the source, improve resource utilization efficiency, reduce or avoid the production of pollutants in production, service and product use.

Health and emissions to mitigate or eliminate harm to human health and the environment.

3.2 Cleaner production standard cleaner production standard

Refers to the principle of life cycle analysis, from production process and equipment, resource and energy utilization, products, pollutant generation, waste recycling and six aspects of environmental management, giving staged indicators to the clean production level of the industry, guiding the company's clean production and pollution Process control.

Note: Quoted from HJ/T 425 Technical Guidelines for Cleaner Production Standards.

3.3 pollutant generation indicators (before end treatment) pollutants generation indicators (before end-of-pipe treatment) that is, the coefficient of pollution generation refers to the amount of pollutants produced before the production (or processing) of a unit product (before end treatment). Including unit products Indicators such as the amount of carbon dioxide produced and the amount of particulate matter produced per unit of product.

3.4 Crude lead smelting lead smelting

The process of producing crude lead with lead concentrate or lead-zinc mixed concentrate as the main raw material.

3.5 Mercury (Arsenic) contained in sulfuric acid (Arsenic) contained in sulfuric acid

The amount of mercury (arsenic) in the sulfuric acid product of the flue gas smelting enterprise of the crude lead smelting enterprise is calculated by mass fraction.

4.1 Indicator classification

This standard gives the three-level technical indicators for the clean production level of the production process of the crude lead smelting industry.

Level 1. International advanced level of cleaner production;

Level 2. advanced level of domestic clean production;

Level 3. The basic level of domestic cleaner production.

4.2 Indicator requirements

See Table 1 for the technical requirements for clean production of crude lead smelting enterprises.

Table 1 Technical requirements for clean production of crude lead smelting industry

Clean production index level First, the production process and equipment requirements
Production process

1.1 Smelting process Caveset furnace, oxygen bottom blowing lead Direct (QSL), Caldo furnace, etc.

Lead smelting process Shuikoushan (SKS) lead smelting method + blast furnace, Oxygen-rich top blowing furnace + blast furnace Blast sintering machine sintering - blast Furnace reduction smelting process, sealing Blast furnace smelting (ISP) process Lead smelting process

1.2 Acid-making process Two-shift two-suction acid, low-concentration sulfur dioxide acid-making process Single contact, two-turn two-suction or other acid-making process 2. Equipment

2.1 Scale Single Series > 50,000 t/a

2.2 Automatic Control System Computer controlled feeding and smelting Process, with furnace temperature, pressure, Vibration, gas composition, exhaust flow Online monitoring and alarms such as rate Device, high level of automation Computer controlled feeding and smelting process, with key parameters such as furnace temperature and pressure Number of online monitoring, high level of automation

2.3 Collection and treatment of exhaust gas The furnace body is sealed and has measures to prevent exhaust gas from escaping. Exhaust gas collection and purification device at a location prone to waste gas unorganized emissions

2.4 Storage and transportation of powdered materials adopt closed storage, warehouses are equipped with ventilation facilities; closed transportation

2.5 Residual heat utilization device has waste heat recovery device such as waste heat boiler Second, resource and energy utilization indicators 1. Total lead recovery rate /% ≥ 97 >96 2. Gold into crude lead rate /% ≥ 96 3. Silver into lead ratio /% ≥ 95 4. Total sulfur utilization rate /% ≥ 96 ≥ 95 >94 Two turns and two suctions ≥ 99.8 ≥ 99.6