

**INDUSTRY STANDARD OF THE
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**Guideline on available technologies of pollution prevention and
control for thermal power plant**

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(English Translation)

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Table of Contents

Preface	.ii
1 Scope of application	
2 Normative reference document	
3 Terms and Definitions	
4 Process pollution prevention and control technology	
5 Flue gas pollution control technology	
6 Flue gas ultra low emission technology route	
7 Water Pollution Control Technology	
8 Noise Control Technology	

Foreword

To implement the "Environmental Protection Law of the People's Republic of China" and other laws and regulations, prevention and control of environmental pollution, improve the environmental protection technology and Management work, the development of this standard.

This standard defines the thermal power plant process pollution, smoke pollution and water pollution prevention and control technology, and noise control technology and solid Comprehensive Utilization and Disposal Technology of Waste.

This standard is a guide document.

This standard is the first release.

This standard is organized by the Ministry of Environmental Protection Science and Technology Standards Division.

The drafting unit of this standard. Guodian Environmental Protection Research Institute, China Power Engineering Consulting Group Co., Ltd., Zhejiang University, Fujian dragon Net Environmental Protection Co., Ltd., Zhejiang Feida Environmental Protection Technology Co., Ltd., Beijing Guodian Longyuan Environmental Protection Engineering Co., Ltd., Beijing New Environmental Technology Co., Ltd., Environmental Engineering Assessment Center for Environmental Protection, Beijing Institute of Labor Protection Science.

The Environmental Protection Department of this standard approved on May 21, 2017.

This standard has been implemented since June 1, 2017.

This standard is explained by the Ministry of Environmental Protection.

Possible technical guidelines for pollution control of thermal power plants

1 Scope of application

This standard clarifies the feasible technology and the best feasible technology of pollution prevention and control of thermal power plant.

This standard applies to GB 13223 in the provisions of the thermal power enterprises, including flue gas pollution control technology to 100MW and above coal-fired power Plant flue gas treatment as the focus.

2 Normative reference documents

This standard refers to the following documents or the terms thereof. For undated references, the latest edition applies to this standard.

GB 252 ordinary diesel Standard for Hazardous Waste Identification Emission standard of air pollutants in thermal power plants GB 13223 Safety standard for safe landfill pollution of hazardous wastes GB 18598 Standard for Pollution Control of Storage and Disposal Site for General Industrial Solid Waste Code for fire protection of building design GB 50016 GB 50192 river harbor engineering design specification Code for design of large and medium - sized thermal power plants GB 50660 DL/T 1493 coal - fired power plant ultra - clean bag compound dust collector Technical specification for selective flue gas denitrification in thermal power plants - Selective catalytic reduction method Technical specification for selective flue gas denitrification in thermal power plants - Selective non - catalytic reduction method Technical specification for operation and management of flue gas treatment facilities in thermal power plant JB/T 11829 coal - fired power plant with electric bag compound dust collector JTJ 211 harbor general plan design specification

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1 Standard state standard condition

The temperature is 273K, the pressure of 101325Pa when the state, referred to as "standard". This standard relates to the concentration of air pollutants, Special instructions, are under the standard dry smoke, oxygen content of 6% as a benchmark.

3.2 Feasible technology available technology

For the thermal power plant production process may produce pollution in the domestic thermal power plants have been applied to achieve national pollutant emissions (control)

Standard pollution prevention and control technology and secondary pollution prevention and control technology, referred to as "feasible technology."

3.3 Best Available Technology best available technology

In the feasible technology, taking into account the environment, energy, economic and other factors, can be achieved to achieve the maximum emission reduction technology Surgery

3.4 Particulate matter particulate matter

The solid and liquid particulate matter suspended in the flue gas, including the dust particles and the flue gas desulfurization which are not fully collected by the precipitator, the secondary particles produced during the denitrification process.

3.5 Ultra-low emission

The concentration of SO₂ and NO_x in the flue gas of coal-fired power plants is not higher than 10 mg/m³, 35 mg/m³ and 50 mg/m³ respectively.

4.1 Dust handling, transportation and storage of dust prevention and control technology

4.1.1

Coal-fired power plant coal handling, transportation and storage facilities should be designed according to GB 50660 requirements.

4.1.2

coal-fired power plant coal handling should be taken to close, spray, etc. to prevent dust pollution. When the water is coal, it is dedicated to unloading coal wharf Design should be consistent with JTJ 211 and GB 50192 environmental requirements, unloading machinery should adopt bridge grab rope traction unloader, closed snail 2 off the ship. When the car to coal, the coal station should adopt the seam coal slot coal unloading device, in addition to the car into the outlet should take closed measures. iron Road to coal, coal unloading facilities in addition to the train into the exit should be taken outside the measures.

4.1.3

In the process of coal transportation in the factory, the coal transportation bridge and the coal transportation station shall be sealed and the round pipe belt conveyor may be used and Configure the dust collector as needed. Dust catcher can be based on the actual situation of coal volatiles choose bag filter or dry electrostatic precipitator and red the combination of wet, dust and ventilated electrostatic precipitators is shown in Table 1. Wet dust produced by coal waste Water to be treated.

4.1.4

coal storage in the factory should take closed coal field. Closed coal yard can use bar closed coal field, round closed coal field, silo type Coal field and so on. Coal spoiler should be set up to prevent coal spontaneous combustion. Can not be closed to the coal field can be considered wind and dust suppression network, wind four the above weather conditions, wind and dust suppression network should be greater than 60%. Storage site should be based on environmental requirements, climate characteristics, large storage of coal Small factors such as selection of appropriate dust control measures, see Table 1.

Table 1 Coal handling, storage and transportation process dust control feasible technology

Dust prevention and control link feasible technology applicability Coal handling operations
 Cheng Dian dust prevention and control (1) closed spiral unloader, bridge grab rope traction ship unloader water to coal (2) seam coal slot coal unloading device, both sides of the closed car to coal (3) coal unloading facilities in addition to the exit should be taken outside the railway measures to coal Factory coal transport for Industrial process dust control (1) round pipe belt conveyor or closed coal bridge is suitable for all power plant coal transportation (2) transfer station with bag filter for a variety of coal (3) transfer station with electrostatic precipitator for low-volatile coal (4) transfer station using wet dust collector and wet electrostatic precipitator combination for a variety of coal, more sensitive areas of the environment Plant storage site dust Control (1) open field coal field spray device, dry coal shed, the surrounding green Applicable to rainy, humid areas in the south and no around Environmentally sensitive target of the existing coal field (2) Opencast coal field Sprinkler and wind and dust suppression network combination for non-closed coal field (3) storage silo configuration library top filter is suitable for small coal storage, coal requirements of high power plant (4) Closed coal field setting Sprinkler is suitable for closed coal fields 4.2 dust removal agent handling, transportation and storage of dust prevention and control technology

4.2.1 Common desulfurization agent for lime or limestone powder.

4.2.2 loading and unloading operation dust prevention and control should be used to configure the unloading tanker unloading equipment, such as Roots blower.

4.2.3 transport dust control should be used closed tanker.

4.2.4 storage dust control should be used in storage silo bag filter, the material when the dust separation and collection of dust should also be used in addition to bag Dust.

4.3 Ash field dust prevention and control technology**4.3.1**

Power plant ash field should be used in blocks, to minimize the operating surface.