

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

HJ 820-2017

**Self-monitoring guidelines for pollution sources -- Thermal
power generation and boiler**

排污单位自行监测技术指南 火力发电及锅炉（发布稿）

(English Translation)

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Foreword

For the implementation of the "People's Republic of China Environmental Protection Law" "People's Republic of China Air Pollution Control Law" "People's Republic of China and the National Water Pollution Prevention Law "to guide and regulate the thermal power plant and boiler self-monitoring work, the development of this standard.

This standard puts forward the general requirements of self-monitoring of thermal power plants and boilers, monitoring program development, information recording and reporting the basic content and requirements.

This standard is the first release.

This standard is proposed by the Environmental Monitoring Department of the Ministry of Environmental Protection and the Ministry of Science and Technology Standards.

The main drafting unit of this standard. China Environmental Monitoring Station, Jiangsu Province Environmental Monitoring Center.

The environmental protection department of this standard approved on April 25, 2017.

This standard has been implemented since June 1, 2017.

This standard is explained by the Ministry of Environmental Protection.

Technical Guidelines for Self - Monitoring of Pollutant Discharge Unit

1 Scope of application

This standard puts forward the general requirements of self-monitoring of thermal power plants and boilers, monitoring program development, information recording and reporting the basic content and requirements.

This standard applies to independent thermal power plants and enterprise-owned thermal power units (plant) self-monitoring, and sewage units the monitoring of the boiler; does not apply to the garbage, hazardous waste as fuel for thermal power plants and boilers.

The unit of sewage can refer to the water, air pollutants and noise emitted by this standard in the production and operation phase and the surrounding environment Quality impact to carry out monitoring.

2 Normative reference documents

The contents of this standard refer to the following documents or their terms. Those who do not specify the date of the reference file, the effective version of the appropriate for this standard.

Emission standard of air pollutants in thermal power plants GB 13223 GB 13271 Boiler Air Pollutant Discharge Standard Technical specification for groundwater environmental monitoring General guidelines for self - monitoring of sewage disposal units

3 Terms and definitions

GB 13223, GB 13271 Definitions and the following terms and definitions apply to this standard.

Thermal power plant

Combustion of solid, liquid, gaseous fuel power plants.

Owned thermal power generating units (plant) captive power plant Refers to the enterprises to meet their own production, office and life needs of the power of the main building of the thermal power plant (plant).

Boiler

Is the use of fuel combustion to release the heat or other heat to heat the hot water or other working fluid to produce the required parameters (temperature, Pressure) and quality of steam, hot water and other working equipment.

4 General requirements for self-monitoring

Sewage units should check the unit's pollution sources, pollutant indicators and potential environmental impact, develop monitoring programs, set and maintenance monitoring facilities, self-monitoring in accordance with the monitoring program, good quality assurance and quality control, record and storage monitoring Data, according to the law to the public monitoring results.

5.1.1.1 Monitoring points

Net smoke and the original smoke mixed emissions, should be in the boiler or gas turbine (internal combustion engine) exhaust pipe, or flue gas after the convergence of Mixed flue on the set of monitoring points; net flue gas emissions directly, should be set in the net flue gas flue monitoring point, a bypass the bypass flue should also be set for monitoring points.

5.1.1.2 Monitoring indicators and minimum monitoring frequency of monitoring points such as boilers or gas turbine exhaust pipes shall be carried out according to Table 1.

Table 1 Minimum monitoring frequency of monitoring indicators for organized emissions

Fuel type	boiler or gas turbine scale	monitoring indicators	monitoring frequency
Coal	14MW or 20t/h and above	Particulate matter, sulfur dioxide, nitrogen oxide automatic monitoring Mercury and its compounds 1, Ammonia 2, Ringermann blackness quarter	14MW or 20t/h or less
Particulate matter, sulfur dioxide, nitrogen oxides, Ringermann blackness, Mercury and its compounds	Fuel 14MW or 20t/h and above	Particulate matter, sulfur dioxide, nitrogen oxide automatic monitoring Ammonia 2, Ringgain Blackness Quarter	14MW or 20t/h of the following particles, sulfur dioxide, nitrogen oxides, Ringermann black month
Gas	3 14MW or 20t/h and above	Nitrogen oxide automatic monitoring Particulate matter, Sulfur Dioxide, Ammonia 2, Ringgain Blackness Quarter	14MW or 20t/h or less
Nitrogen oxides month	Particulate matter, sulfur dioxide, Ringermann black years		

Note 1: When coal is changed, mercury and its compounds are required to increase the frequency of monitoring.

Note 2: the use of liquid ammonia and other ammonia as a reducing agent, remove the flue gas nitrogen oxides, can be selected.

Note 3: Boilers or gas turbines for other gas fuels only for purifying natural gas as fuel;
Of the boiler or gas turbine.

Note 4: briquette, coal-water slurry, coal gangue boiler reference coal-fired boiler; oil shale, petroleum coke, biomass boiler or gas turbine group with reference to oil the boiler or gas turbine.

Note 5: A variety of fueled boilers or gas turbines should perform the most stringent monitoring frequency.

Note 6: Exhaust gas monitoring should simultaneously monitor flue gas parameters.

5.1.2 Unorganized emissions monitoring points, indicators and frequency

Unorganized emissions monitoring points set, monitoring indicators and monitoring frequency according to Table 2 implementation.

Table 2 Minimum monitoring frequency of unorganized emissions monitoring indicators

Fuel Type	Monitoring Point	Monitoring Indicator	Monitoring Frequency
Coal, coal gangue,			

petroleum coke, oil shale, biomass plant boundary particles 1 quarter Oil and gas storage tank around the factory and non - methane total hydrocarbon quarter all fuel ammonia tank area around the ammonia 2 quarter

Note 1: The frequency of monitoring is increased in unclosed yards. Peripheral sensitive, may be appropriate to reduce the frequency of monitoring.

Note 2: Applicable to the use of liquid ammonia or ammonia as a reducing agent business.

5.2 Wastewater discharge monitoring

Monitoring points, monitoring indicators and monitoring frequency of wastewater discharge monitoring are carried out according to Table 3.

Table 3 Minimum monitoring frequency of wastewater monitoring indicators

Boiler or Gas Turbine Scale Fuel Type	Monitoring Point	Monitoring Index	monitor frequency
Involving a single 14MW or 20t/h and above the boiler or gas turbine Machine	sewage unit	Coal Total discharge of wastewater PH, chemical oxygen demand, ammonia nitrogen, suspended solids, total Phosphorus 1, petroleum, fluoride, sulfide, volatile phenol, Soluble total solids (total salt), flow rate	Desulfurization wastewater discharge port pH value, total arsenic, total lead, total mercury, total cadmium, flow month
Gas enterprise	wastewater total discharge	pH, chemical oxygen demand, ammonia nitrogen, suspended solids, total Phosphorus 1, total dissolved solids (total salt), flow rate	Quarterly
Fuel	Total discharge of wastewater	PH, chemical oxygen demand, ammonia nitrogen, suspended solids, total Phosphorus 1, petroleum, sulfide, dissolved total solids (all Salt), flow	Desulfurization wastewater discharge port pH value, total arsenic, total lead, total mercury, total cadmium, flow month
all circulating cooling water	discharge port	pH, chemical oxygen demand, total phosphorus, flow rate	quarter
all DC cooling water	discharge ports	Water temperature, flow day	Total residual chlorine
Winter and summer	the prison	Measured one	Only a single
14MW or 20t/h below the boiler	sewage unit	all enterprises wastewater total discharge	pH, chemical oxygen demand, ammonia nitrogen, suspended solids, flow

Note 1: If the sewage is not discharged into the total discharge, the total phosphorus can not be measured.

Note 2: In addition to desulfurization wastewater, and other industrial wastewater mixed emissions, with reference to the relevant industrial sector monitoring requirements;

, The frequency of monitoring can be performed on a quarterly basis.

5.3 Environmental noise monitoring at the factory boundary

The environmental noise monitoring point setting should be followed in the principle of HJ 819. The main consideration is given in Table 4.

Cloth situation.