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

DL/T 387-2019

**Guideline of flue gas bag filter selection for thermal power
plants**

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces DL/T 387-2010 "Guidelines for the selection of flue gas bag dust collectors for thermal power plants", this standard and DL/T 387-2010 Compared with the main technical changes as follows.

--Additions, deletions and modifications to "Terms and Definitions";

--Added the flue gas parameters at the inlet of the dust collector, the main technical parameters of the bag filter, the composition of the bag filter, and the energy consumption of the dust collector index;

--Adjusted the recommended value of air-to-cloth ratio, the body structure and its content, the selection of dust collector filter bags, the type and technology of electrical panels Features;

-Canceled the comparison table of online and offline cleaning methods, the types and technical parameters of electrical components, and the bag filter System cables and related technical parameters.

This standard was proposed by the China Electricity Council.

This standard is under the jurisdiction of the Electric Power Industry Environmental Protection Standardization Technical Committee.

Drafting organizations of this standard. Nanjing Longyuan Environmental Protection Co., Ltd., Guodian Research Institute of Science and Technology, Donghua University, Datang Environmental Industry Group Co., Ltd., Fujian Longjing Environmental Protection Co., Ltd.

1 Scope

This standard specifies the technical requirements for the selection of flue gas bag filter and auxiliary equipment for thermal power plants.

This standard applies to the selection, inspection and acceptance of flue gas bag filter and auxiliary equipment in thermal power plants.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this file. For undated references, the latest version (including all amendments) applies to this document.

GB/T 700 carbon structural steel GB 4053.1 Safety requirements for fixed steel ladders and platforms Part 1: Steel straight ladders GB 4053.2 Safety requirements for fixed steel ladders and platforms Part 2: Steel inclined ladders GB 4053.3 Safety requirements for fixed steel ladders and platforms Part 3: Industrial protective railings and steel platforms GB/T 33017.3 Technical requirements for evaluation of high-efficiency air pollutant control equipment-Part 3: Bag filter GB 50017 Steel Structure Design Code GB 50205 Code for Construction Quality Acceptance of Steel Structure Engineering GB 50217 Power Engineering Cable Design Code DL/T 659 Acceptance Test Procedure for Distributed Control System of Thermal Power Plant DL/T 1121 Technical code for bag dust removal engineering of boiler flue gas in coal-fired power plant DL/T 1175 Technical requirements for filter material filter bag of boiler flue gas bag filter in thermal power plant DL/T 5041 Technical Regulations for In-plant Communication Design of Thermal Power Plants DL/T 5044 Technical Specification for Design of DC Power Supply System in Power Engineering

DL/T 5072 Thermal power plant insulation paint design specification DL/T 5153 Technical Specification for Auxiliary Power Design of Thermal Power Plant HJ/T 325 Technical Requirements for Environmental Protection Products, Bag Filter Bag Frame HJ/T 326 Technical Requirements for Environmental Protection Products Covered Filter Material for Bag Filter JB/T 5916 Electromagnetic pulse valve for bag filter JB/T 8471 Technical Requirements and Acceptance Specification for Installation of Bag Filter JB/T 10191 Bag filter safety requirements for pulse jet bag filter air distribution box

3 Terms and definitions

The following terms and definitions apply to this standard 3.1 Bag filter it is a device to capture and remove particulate matter in the flue gas using the interception and retention of the filter bag.

Pulse-jet bag filter Compressed air is used as the driving force for dust removal, and the pulse blowing device is used to release compressed air in an instant, so that the filter bag can be produced by shock and vibration.

A bag filter with sharp deformation and reverse airflow for dust removal.

Rotation pulse-jet bag filter Compressed air is used as the driving force for dust removal, and the elliptical filter bags arranged in concentric circles are pulsed to remove dust by using a rotary injection device.

The bag filter.

Specific power consumption the amount of electricity consumed by the dust collector to process a unit of dust-containing flue gas, unit. kW-h/m³.

Compressive strength of casing the maximum static pressure difference between the inside and outside of the dust collector housing within the allowable deformation range, in Pa.

Air leak percentage

The difference between the standard state gas flow at the outlet of the dust collector and the standard state gas flow at the inlet accounts for the amount of gas flow in the standard state at the inlet Percentage, unit. %.

Air to cloth ratio

Under working conditions, the amount of dust-containing flue gas passing per unit time and unit filter area of the filter bag, unit. m³/(m²·min).

Bag filter tube sheet Perforated steel plate located between the clean air chamber and the filter chamber of the dust collector to fix the filter bag and the filter bag frame.

Pulse valve

A diaphragm valve that is controlled by a pilot valve and instantly blows compressed air.

3.10

Electro-magnetic pulse valve the solenoid pilot valve is combined with the pulse valve, and the diaphragm valve is controlled by electrical signals.

3.11

Pulse-air manifold

A container that is repeatedly filled with compressed air to ensure the dust removal effect in the pulse jet bag filter.

3.12

Gas distribution device A device used to adjust the air distribution between the filter chambers and the air distribution in the filter chamber.

4 Basic parameters of bag filter selection

4.1

Parameters of boiler and main auxiliary equipment, please refer to Appendix A.

4.2

Design coal quality and smoke dust analysis parameters, see Appendix A.

4.3

The particle size distribution, true density, bulk density, angle of repose and viscosity of the smoke and dust.

4.4

For information on flue gas composition, see Appendix B.

4.5

Refer to Appendix B for the inlet flue gas parameters of the dust collector.

4.6

Other data that should be collected before model selection, including local weather (temperature, air pressure, frozen soil depth, wind load and snow load, etc.), Geography, engineering geology (engineering geology, peak acceleration of ground motion, basic seismic intensity and altitude, etc.) where the project is located, etc.

according to.

5 Main technical parameters of bag filter