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**INDUSTRY STANDARD OF THE
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**Safety Specifications for Dedusting System Used in Dust
Explosion Hazardous Area
(English Translation)**

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Foreword

All the technical content of this Standard is compulsory, except Clauses 1, 2 and 3, 5.1.4c), 5.1.7c), 6.3.7.1.1, 7.1.6, 7.1.7, 9.3a).

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

This Standard was proposed by the Fourth Supervision Division of the State Administration of Work Safety.

This Standard shall be under the jurisdiction of Technical Subcommittee 5 on Dust Explosion Prevention of National Technical Committee 288 on Work Safety of Standardization Administration of China (SAC/TC 288/SC 5).

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1 Scope

This Standard specifies the requirements for explosion-proof measures, maintenance and overhaul, detection and verification of dedusting system that are used in dust explosion hazardous area.

This Standard applies to the design, manufacturing, installation, acceptance, use and maintenance of dedusting system that are used in dust explosion hazardous area.

This Standard does not apply to dedusting system that are used in production sites of chemicals, mining, tunneling, fireworks and firecrackers, and commercial explosive materials.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition dated applies to this document. For undated references, the latest edition of the referenced documents (including all amendments) applies to This Standard.

GB 2894, Safety Signs and Guideline for the Use

GB 7231, Basic Identification Colors and Code Indications and Safety Sign for Industrial Pipelines

GB 12158, General Guideline for Preventing Electrostatic Accidents

GB 12476.1, Electrical Apparatus for Use in the Presence of Combustible Dust - Part 1. General Requirements

GB 12476.2, Electrical Apparatus for Use in the Presence of Combustible Dust - Part 2. Selection and Installation

GB 15577, Safety Regulations for Dust Explosion Prevention and Protection

GB/T 15605, Guide for Pressure Venting of Dust Explosions

GB/T 16758, The Classification and Technical Specification of Exhaust Hood

GB/T 17919, Directives for Dust Explosion Protection for Deduster in Dust Explosion Hazardous Area

GB 50019, Code for Design of Heating Ventilation and Air Conditioning in Industrial Buildings

GB 50057, Design Code for Protection of Structures against Lightning

GB 50058, Code for Design of Electrical Installations in Explosive Atmospheres

AQ 7005, Safety Requirements for the Use of Woodworking Machinery

3 Terms and Definitions

For the purposes of this Standard, the following terms and definitions apply.

3.1

dust

small solid particles in the atmosphere which settle out under their own weight, but which may remain suspended in air for some time.

3.2

combustible dust

dust that can burn or glow in air and could form explosive mixtures with air at atmospheric pressure and normal temperatures.

3.3

dust explosion hazardous area

the sites at where combustible dust, combustion-supporting gas or ignition source is present.

3.4

dedusting system

a system which is used to gather the solid particles in gas- and solid-phase flows, comprising dust collection hood or dust collection cabinet, air hose, fan, dust catcher and control device.

3.5

explosion-proof device

the device which adopt the technique of prevention and control of dust explosion, to prevent the formation of dust clouds or possible ignition sources and put combustible

If there exists toxic, corrosive dust and combustible dust, the deduster and air-duct shall not adopt explosion-venting device for pressure release; it shall select the explosion-suppression device that can charge fire extinguishing gas or powder media into the deduster and air-duct to extinguish flames.

4.3 The box of the deduster shall meet the following requirements.

- a) The box is made of a steel metallic material, or select flame-resistant materials and take anti-static measures if other materials are used; it shall not use aluminium metallic materials.
- b) The design strength of the box shall be able to withstand the maximum explosive pressure generated after explosion-proof measures are adopted; and the box installed in buildings shall adopt steel metallic materials and welding structures.
- c) The included angles between the box-plates of a square-box shall be arc-treated.
- d) The internal surface of the box shall be smooth; the box made of steel metallic material shall be treated for rust-proofing; aluminium coating shall not be used.

4.4 The operating conditions of the dry deduster shall include continuous dust discharging and continuous dust conveying. It should not adopt settling chamber to perform dust treatment.

4.5 The deduster used in explosion hazardous areas of aluminium-magnesium dust

and wooden product dust shall work under negative pressure conditions; for other dust explosion areas, if dedusting system adopts positive pressure to blow dust, then it shall adopt reliable measures to prevent the ignition sources.

4.6 Aluminium-magnesium dust shall not share the same dedusting system with iron

dust and other kinds of combustible dust; and the dedusting system shall not connect with air-duct and equipment that carry combustible gas, high-temperature gas, smoke dust and other industrial gases.