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

LY/T 1659-2020

Replacing LY/T 1659-2006

**Technical code of dust prevention and control for wood-based
panels industry
(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 is a revision of LY/T 1659-2006 "Manufacturing Dust Control Regulations for Wood-Based Panel Industry". This standard and LY/T 1659-2006 revision, except for editorial revisions, the main technical changes are as follows.

--In the scope, non-wood wood-based panels and inorganic wood-based panels, and wood-plastic composite material construction projects only involve wood and plant fibers.

The scope of application of the dimensional dust section or facility (see 1);

--In the normative reference documents, industrial enterprise graphic planning and design, architectural design and fire protection, industrial ventilation design and dust-related fields have been added Explosion-proof, safety signs and other specifications of the system, as well as the energy-saving and acceptance specifications of the dust removal system, delete the concentration of dust in the air in the workplace Two reference documents (see 2);

-Added a chapter on terms and definitions (see 3);

- The original standard's "basic dust-proof rules" were revised to "basic principles", and the dust-proof principle was revised, and the principle of dust explosion-proof was added.

Then (see 4);

--Combine the "Technical Requirements for Dust Prevention" and "Technical Measures for Dust Prevention" of the original standard into the "Technical Requirements" to incorporate dust prevention and dust removal Integrate with explosion protection, put forward

comprehensive prevention and control technical requirements and measures, and modify corresponding items (see 5);

- Change the original standard "Dust prevention and dust removal equipment management" to "Management requirements", and add the section "Dust prevention and explosion management" (see 6.1), the section "Equipment Management" is added, and the original standard "Dust removal equipment management" is included in the "Equipment Management".

Management of dust prevention and control of production and auxiliary production equipment (see 6.2);

Please note that certain contents of this standard may involve patents. The issuing organization of this standard does not bear the responsibility for identifying these patents.

This standard was proposed and managed by the National Wood-based Panel Standardization Technical Committee (SAC/TC 198).

Drafting organizations of this standard. Nanjing Forestry University, Daya Wood-based Panel Group Co., Ltd., Yihua Life Technology Co., Ltd., Dongying Zheng Hemu Industry Co., Ltd., Dehua Rabbit Baby Decoration New Material Co., Ltd., Huzhou Haiqing Wood and Bamboo Technology Co., Ltd., Jiangsu Senmao Bamboo and Wood Industry Co., Ltd.

Co., Ltd., Anhui Yangzi Flooring Co., Ltd., Zhejiang Liangyou Wood Co., Ltd., Huotuopu Yansen (Qingdao) Environmental Equipment Co., Ltd., Jiangsu Pinglin Machinery Co., Ltd., Liyang Keda Environmental Protection Machinery Manufacturing Co., Ltd., Liyang Zhongjing Environmental Protection Machinery Co., Ltd., Guangzhou Lihui Environmental Protection Technology Co., Ltd., Jiangsu Juge Industrial Equipment Co., Ltd., Henan Yongwei Security Co., Ltd., Yiyang City Product Quality Supervision Inspection and Research Institute, Xuzhou Kailin Wood Machinery Plant.

1 Scope

This standard specifies the terms and definitions, basic principles, technical requirements and management requirements for dust prevention and control in the wood-based panel industry.

This standard is applicable to the engineering design of new construction, expansion and reconstruction projects (referred to as "construction projects") that produce wood or non-wood wood based panels and dust prevention and control management during the operation of construction projects. It is also applicable to the production of inorganic wood-based panels and wood-plastic composite materials. Construction projects that only involve wood and plant fiber dust work section or facility.

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 document.

For undated references, the latest version (including all amendments) applies to this document.

GB 2894 safety signs and guidelines for their use GB/T 3840 Technical methods for establishing local air pollutant emission standards GB 15577-2018 Dust explosion-proof safety regulations GB 16297 Comprehensive Emission Standard of Air Pollutants GB/T 17919-2008 Explosion-proof guidelines for dust collectors used in dust explosion hazardous locations GB/T 18259-2018 Artificial board and its surface decoration terms GB 50016-2014 Building Design Code for Fire Protection GB 50019 Design Code for Heating, Ventilation and Air Conditioning GB 50187-2012 General Layout Design Specification for Industrial Enterprises GBZ 1-2010 Design Sanitary Standard for Industrial Enterprises GBZ 2.1 Occupational Exposure Limits for Hazardous Factors in the Workplace Part 1: Chemical Hazardous Factors AQ 4228 Dust Explosion Safety Specification for Wood Processing System AQ 4273 Safety Technical Specification for Dust Removal System for Dust Explosion Hazardous Locations LY/T 1806 Design specification for pneumatic dust removal (transportation) system in wood industry LY/T 1862 Technical specification for energy saving of pneumatic transportation and dust removal system in wood industry LY/T 2002 General Rules for Acceptance of Pneumatic Conveying System in Wood Industry

3 Terms and definitions

The following terms and definitions defined in GB/T 18259-2018 apply to this document.

Wood-based panels

Using wood or non-wood plant resources as raw materials, processing them into various material units, applying (or not applying) adhesives and other additives, Manufactured plates or molded products.

[Note] Mainly refers to plywood, particle rice, fiberboard, etc.

[GB/T 18259-2018 2.1] 3.2 Wood bulk material the wood is machined through cutting methods such as planing, milling, sawing, drilling, rotary cutting, sanding, etc., or hammering, impacting, blasting, etc.

Mechanical processing, the solids of different sizes and sizes are mainly produced in flake, strip, rod, fibrous, granular, powder and other shape categories Bulk material, referred to as shredded material. Scraps include process scraps and associated scraps.

Bulk raw material

Use special processing equipment to prepare small-diameter wood, branch wood, edge bark, slats, waste wood and other raw materials into wood that meets the process requirements. Material units such as chips, shavings, fibers, etc. Process scraps also include associated scraps that meet process requirements and are used as comprehensive resources.

Associated scrap processing residue Scattered wood processing residues, such as shavings, sawdust, sand, produced during the production of furniture, floors, doors and windows, and wood-based panels. Chips such as light powder.

Wood powder

The particle size is a collective term for a collection of discrete wood material particles below hundreds of microns.

Note: The wood flour in the wood-based panel industry is mainly derived from sanding, grinding, polishing and direct generation of powdery particles and cutting methods such as planing, milling, and drilling.

The powdery particles contained in the scraps, and in the process of completing the conveying, reloading, storage, quantification, sorting, and classification of the scraps, due to the friction between the scraps, Powdery particles produced by mechanical action such as collision and extrusion.

Wood dust cloud

The phenomenon that wood powder particles continue to exist in a limited space in a suspended state or in a dispersed motion state, referred to as dust cloud.

In the wood-based panel industry, dust clouds often exist in workplaces and workshops where dust is emitted or leaked, and there are closed production equipment with dust in the casing and loading and unloading places of the scrap conveyor, inside the silo and dust collector, and in the gas-solid two-phase flow field to complete the drying, sorting, and in the space of transportation, gas-solid separation and other operations.

Note: According to the hazards of dust clouds, the particle size range for key control is different. In the field of air pollution control and industrial dust removal, the particle size of dust is the range of 1~100 μm ; in the field of occupational health, the particle size range is 1 μm ~10 μm ; in the field of industrial dust explosion prevention and control, the particle size is less than 500 μm .

Moisture content

The percentage of the mass of moisture contained in the material to the mass of the material, and the ratio of the mass of the absolute dry material and the mass of the wet material are the absolute moisture content and relative for moisture content.

Pneumatic conveying