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

JG/T 231-2018

**Technical requirements of building glass skylight system
(English Translation)**

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1 Scope

This Standard specifies the terms and definitions, classification and marks, general requirements, materials and components, production and assembly requirements, requirements and test methods.

This Standard is applicable to building glass skylight system.

2 Normative references

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

GB/T 2680, Determination of light transmittance, solar direct transmittance, total solar energy transmittance and ultraviolet transmittance for glass in building and related glazing factors

GB/T 4171, Atmospheric corrosion resisting structural steel

GB/T 5117, Covered electrodes for manual metal arc welding of non-alloy and fine grain steels

GB/T 5118, Covered electrodes for manual metal arc welding of creep- resisting steels

GB/T 5224, Steel strand for prestressed concrete

GB/T 5237 (all parts), Wrought aluminium alloy extruded profiles for architecture

GB/T 8485, The graduation and test for airborne sound insulating properties of windows and doors

GB 8624, Classification for burning behavior of building materials and products

3 Terms and definitions

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

3.1

building glass skylight system glass skylight system for short

4.1 Classification

4.1.1

According to the supporting structure, it can be divided into steel structure (G), cable rod structure (S), aluminum alloy structure (L), glass beam structure (B).

4.2.1 Marking method

The mark is composed of the product code of the glass skylight system (CGD), standard code, support structure category code, opening-closing category code, closed category code, and main parameters (structural performance).

4.2.2 Marking example

Example. CGD-S-K-FB/3.5-JG/T231, which represents a closed glass skylight system that is supported by cable rod structure, is openable, the structural performance is 3.5kPa and complies with the industrial standard JG/T 231.

5 General requirements

5.1

The materials used for glass skylight system shall meet the relevant regulations of the current national standards, see Annex A. There shall be exit- factory certificate and quality certificate.

5.3

The area of glass panel used for glass skylight system shall not exceed 2.5m². The length of the long side shall not be greater than 2m.

5.7

The energy-saving design of glass skylight system shall comply with the requirements of GB 50176, GB 50189, JGJ 26, JGJ 75 and JGJ 134.

5.8 The durability of glass skylight system, anti-condensation (frost, ice) and

hail resistance shall meet the design requirements.

5.15 The visible light transmittance of glass skylight system shall meet the lighting design requirements. A glass panel with visible light reflectance not greater than 0.30 is preferred.

6.1 Aluminum alloy profile

6.1.1

The base material of aluminum alloy profile shall meet the requirements of GB/T 5237.1. The allowable size deviation shall meet the requirements of high precision or ultra-high precision.

6.1.2

When aluminum alloy profiles using anodizing, electrophoretic painting, powder spraying, fluorocarbon paint spraying for surface treatment, it shall respectively comply with the requirements of GB/T 5237.2, GB/T 5237.3, GB/T

5237.4, and GB/T 5237.5. The thickness of the surface treatment layer shall meet the requirements of Table 1.

6.3 Pull rod

6.3.1

Steel ropes for glass skylight system shall use steel strands. The nominal diameter of the steel strand of the main load steel rope shall not be less than

12mm and shall meet the design requirements.

6.3.2

Zinc-5% aluminum-mixed rare earth alloy coated steel strands shall meet the requirements of GB/T 20492. Other steel strands shall meet the requirements of GB/T 5224. Stainless steel strands shall meet the requirements of GB/T 25821 and JG/T 200.

6.4.4 In addition to the requirements of 6.4.3 of this Standard and GB/T 11944, the laminated insulating glass for glass skylight system shall also meet the following requirements.

6.4.6 The glass for photovoltaic glass skylight system shall meet the requirements of JGJ 113.

6.5 Hardware

6.5.1

The hardware for glass skylight system shall comply with the relevant national standards. See Annex A for common material standards.

6.5.2

In addition to stainless steel, hardware for glass skylight system shall be anti-corrosive.

6.5.3

The bearing capacity and service life of the hardware shall meet the design requirements. Check the bearing capacity of main stressed hardware.

6.9 Other materials

6.9.1

Padding material for the top joints of glass skylight system shall use polyethylene foam stick. The density shall not be greater than 37kg/m³.

6.9.2 Graduation of combustion performance of insulation materials for glass

skylight system shall comply with relevant requirements of GB 8624. Non-combustible or flame-retardant materials such as rock wool, mineral wool, glass wool shall be used.

7.1 Glass production requirements

7.1.1

The size and allowable deviation of rectangular tempered glass shall meet the requirements of Table 2.

feeler

7.1.3 The size and allowable deviation of rectangular insulating glass panels

shall meet the requirements of Table 4.

7.1.4 The size and allowable deviation of triangle, rhombus, parallelogram, trapezoid, round panels shall meet the requirements of Table 5.

7.3.1.3 Components shall meet design requirements. The allowable deviation of component assembly shall meet the requirements of Table 12.