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

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Standard for design of energy conservation of flat glass plant

平板玻璃工厂节能设计标准

(English Translation)

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1 General

1.0.1

This standard is formulated in order to save and rationally utilize energy in the energy-saving design of flat glass factories, standardize the energy-saving requirements and corresponding measures in the design of flat glass factories.

1.0.2

This standard is applicable to the energy-saving design of newly-built, reconstructed and expanded flat glass factories adopting the float glass production process.

1.0.3

The energy-saving design of flat glass factories shall not only implement the provisions of this standard, but also comply with the relevant current national standards.

2 Basic regulations

2.0.1

The energy-saving design of the flat glass factory shall be carried out simultaneously with the engineering design, and the technical measures adopted in the energy-saving design shall be implemented simultaneously with the project.

2.0.2

The energy-saving design of flat glass factories shall meet the requirements of energy-saving assessment documents and review opinions.

2.0.3

Energy-saving products should be selected for process equipment and electrical automation equipment.

2.0.4

The waste heat of the factory should be preferentially used for the production process and the cold source and heat source of the building.

2.0.5

During the energy-saving design of reconstruction and expansion projects, the current energy consumption status of existing projects should be analyzed, and an energy-saving design scheme should be proposed.

3.1 General drawing

3.1.1

The location of the factory should be close to the railway and waterway traffic lines.

3.1.2

On the premise of meeting the requirements of technological production, the design of the general plan should be adapted to local conditions, rationally use the terrain, and reduce the amount of earth and stone works.

3.1.3

The layout of the pipeline network should take into account the characteristics of each specialty, be reasonable and compact, and have short lines.

3.1.4

Building orientation should make full use of natural lighting and winter sunshine.

3.1.5

The layout of the general plan should save land and define functional divisions; the entrance and exit of goods in the factory area should be close to the logistics center.

3.1.6

On the premise of meeting the technological process and safety, occupational health and fire protection requirements, the workshops should shorten the distance.

3.2 Architecture

3.2.1

Building energy-saving design shall meet the following requirements.

1 For production buildings with heating or cooling requirements, and for rooms with heating or cooling requirements in production buildings without heating or cooling requirements, the energy-saving design should comply with the current national standard "Code for Thermal Engineering Design of Civil Buildings" GB 50176 the relevant regulations;

2 The energy-saving design of public buildings in non-productive buildings shall comply with the relevant provisions of the current national standard "Design Standards for Energy Conservation of Public Buildings" GB 50189;

3 The energy-saving design of residential buildings in non-productive buildings should comply with the current industry standards "Design Standards for Energy Conservation of Residential Buildings in Severely Cold and Cold Regions" JGJ 26, "Design Standards for Energy Conservation of Residential Buildings in Hot Summer and Cold Winter Regions" JGJ 134 and "Hot Summer and Winter Relevant provisions of JGJ 75 Design Standards for Energy Conservation of Residential Buildings in Warm Regions.

3.2.2

The energy-saving design of each part of the building shall meet the following requirements.

1 Glass curtain walls are not suitable for all kinds of buildings;

2 The transparent part of the roof of various buildings should not exceed 20% of the roof area;

3 When buildings of different categories are organized in the same building, energy-saving

design shall be carried out according to their respective categories;

4 For productive buildings with heating in severe cold climate areas or air-conditioning requirements in other climate areas, door buckets should be installed at the outer door or measures to prevent cold (hot) air from infiltrating should be taken;

5. Energy-saving, environment-friendly and economical products should be selected for the enclosure structure;

6 Architectural design should make full use of sunlight, natural lighting and natural ventilation;

7 The building exterior wall and roof insulation materials shall comply with the relevant provisions of the current national standard "Code for Fire Protection Design of Buildings" GB 50016;

8 The thermal performance indicators, construction requirements and implementation standards of the thermal insulation materials used shall be indicated in the architectural design description; the limit value of the heat transfer coefficient and air tightness indicators shall be indicated in the door and window tables, as well as the specifications of the profiles and glass used. Technical Parameters.

3.2.3

According to the local conditions of the building, the roof of each storehouse should be equipped with a solar photovoltaic photothermal utilization system.

3.2.4

The evaluation of green buildings shall comply with the relevant provisions of the current national standards "Evaluation Standards for Green Buildings" GB/T 50378 and "Evaluation Standards for Green Industrial Buildings" GB/T 50878.

3.2.5

The evaluation of non-productive buildings shall comply with the relevant provisions of the current national standard "Evaluation Standards for Industrialized Buildings" GB/T 51129.

4.1 General provisions

4.1.1

The selection of process energy equipment should meet the following requirements.

1 The type selection of small and medium-sized three-phase asynchronous motors should comply with the relevant provisions of the current national standard "Limitable Values of Energy Efficiency and Energy Efficiency Grades of Small and Medium-sized Three-phase Asynchronous Motors" GB 18613;

2 The selection of volumetric air compressors should comply with the relevant provisions of