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PEOPLE'S REPUBLIC OF CHINA**

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Code for acceptance of energy efficient building construction

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- 3 The joints of the thermal insulation wall panels shall not leak.

1 General

1.0.1 This standard is formulated in order to strengthen the construction quality management of building energy-saving projects, unify the construction quality acceptance standards of building energy-saving projects, and ensure the energy-saving effect of building projects.

1.0.2 This standard is applicable to the construction quality acceptance of enclosure structures, heating and air conditioning, power distribution lighting, monitoring and control, and renewable energy building energy-saving projects in new construction, expansion and reconstruction of civil construction projects.

1.0.3 The requirements of this standard for the construction quality of building energy-saving projects are the basic requirements, and the requirements for the quality of energy-saving projects in relevant engineering technical documents and contract documents shall not be lower than those specified in this standard.

1.0.4 The construction quality acceptance of building energy-saving projects should not only comply with this standard, but also comply with the relevant current national standards.

2.0.1 insulation mortar

It is a slurry made by mixing inorganic cementitious materials, additives, fillers and lightweight aggregates, and adding water in proportion to the use, also known as thermal insulation mortar.

2.0.2 Glass shading coefficient

The ratio of the solar radiant heat gain through the window glass to the solar radiant heat gain through the standard 3mm transparent window glass.

2.0.3 transparent curtain wall

Visible light can be transmitted directly into the indoor curtain wall.

2.0.4 Luminaire efficiency

Under the same conditions of use, the ratio of the total luminous flux emitted by the luminaire to the total luminous flux emitted by all light sources in the luminaire.

2.0.5 lighting power density (LPD) lighting power density

The room or place of the building, the installed lighting power per unit area (including the power consumption of the light source, ballast, and transformer). Unit. W/m².

2.0.6 site acceptance

The activity of conducting appearance quality inspection and checking of specifications, models, technical parameters and quality certification documents of materials and equipment entering the construction site and forming corresponding acceptance records.

2.0.7 inspection inspection

3.4.1 The building energy-saving project is a sub-project of the unit project. The division of its sub-divisional projects and sub-projects shall comply with the following regulations.

1 The division of building energy-saving subdivision projects and sub-projects should comply with the provisions in Table 3.4.1.

2 Building energy-saving projects can be checked and accepted according to sub-projects. When the engineering volume of building energy conservation sub-projects is large, sub-projects can be divided into several inspection batches for acceptance.

Table 3.4.1 Division of Building Energy Conservation Subdivision Projects and Subprojects

Continued Table 3.4.1 3.4.2 When the acceptance of building energy-saving projects cannot be divided into sub-projects or inspection batches according to the requirements of Article 3.4.1 of this standard, the construction, supervision, construction and other parties can negotiate to divide the inspection batches; the acceptance items, acceptance contents, acceptance Standards and acceptance records shall comply with the provisions of this standard.

3.4.3 When inspecting by counting method, unless otherwise specified in this standard, the minimum sampling quantity of the inspection lot should comply with the provisions in Table 3.4.3.

Table 3.4.3 Minimum Sampling Quantity of Inspection Lot

3.4.4 When in the same unit engineering project, the acceptance content of building energy saving sub-projects and inspection batches is the same as that of other professional sub-projects, sub-projects or inspection batches, and the acceptance results are qualified, other sub-projects can be used. Acceptance of the results, do not need to repeat the

inspection. The project acceptance data of the building energy conservation division shall be filed separately.

4 Wall energy saving project

4.1 General provisions 4.1.1 This chapter is applicable to the construction quality acceptance of building wall energy-saving projects using wall insulation materials or components such as panels, slurry, blocks and prefabricated composite wall panels.

4.1.2 The wall energy-saving project to be constructed after the completion of the main structure shall be constructed after the quality acceptance of the grassroots. project acceptance. The wall energy-saving project constructed at the same time as the main structure shall be checked and accepted together with the main structure.

4.1.3 For wall energy-saving projects, the following parts or contents shall be inspected for hidden works, and there shall be detailed written records and necessary image data.

- 1 The base layer to which the insulation layer is attached and its surface treatment;
- 2 bonding or fixing the insulation board;
- 3 The thickness of the enclosed insulation material;
- 4 Anchor piece and anchor node method;
- 5 Reinforcing net laying;
- 6 The thickness of the surface layer;
- 7 Treatment of thermal bridge parts of the wall;
- 8 Position, interface treatment, board seams, structural nodes and fixing methods of thermal insulation decorative panels, pre-installed thermal insulation panels or prefabricated thermal insulation wall panels;
- 9 The interface of on-site spraying or pouring organic insulation materials;
- 10 thermal insulation block wall;
- 11 Energy-saving construction methods at various deformation joints.

4.1.4 The thermal insulation materials of wall energy-saving projects shall be protected against moisture, water and fire during transportation, storage and construction.

4.1.5 The division of inspection batches for wall energy-saving project acceptance shall comply with the following regulations unless otherwise specified in this chapter.

- 1 For walls using the same material, process and construction method, the area of the thermal insulation wall after deducting the openings of doors and windows shall be divided into an inspection batch for every 1000m²;

2 The division of inspection batches can also be determined by the construction unit and the supervisory unit through consultation based on the principle of being consistent with the construction process and facilitating construction and acceptance;

3 When the sampling inspection is carried out by counting method, the sampling quantity shall meet the provisions of Article 3.4.3 of this standard.

4.2 Master Control Project 4.2.1 The materials and components used in the wall energy-saving project shall be inspected and accepted on site, and the acceptance results shall be inspected and approved by the supervisory engineer, and corresponding acceptance records shall be formed. The quality certification documents and related technical data of various materials and components should be complete, and should meet the design requirements and the current relevant national standards.

Inspection method. observation, ruler inspection; check quality certification documents.

Quantity to be inspected. according to the incoming batch, 3 samples are randomly selected for inspection in each batch; the quality certification documents shall be checked according to the factory inspection batch.

4.2.2 When the materials and products used in the wall energy-saving project enter the site, the following properties shall be re-inspected, and the re-inspection shall be a witness sampling inspection.

1 Thermal conductivity or thermal resistance, density, compressive strength or compressive strength, tensile strength perpendicular to the direction of the board surface, water absorption rate, and combustion performance (except for non-combustible materials) of thermal insulation materials;

2 Heat transfer coefficient or thermal resistance, mass per unit area, tensile bond strength, and combustion performance (except for non-combustible materials) of wall energy-saving and shaped products such as composite insulation boards;

3 Heat transfer coefficient or thermal resistance, compressive strength, and water absorption of wall energy-saving and shaped products such as thermal insulation blocks;

4 Solar reflectance of reflective insulation materials, hemispherical emissivity;

5 Tensile bond strength of bonding material;

6 Tensile bonding strength and folding ratio of plastering materials;

7 Enhance the mechanical properties and corrosion resistance of the mesh.

Inspection method. check the quality certification documents; random sampling inspection, check the re-inspection report, in which. thermal conductivity (heat transfer coefficient) or thermal resistance, density or mass per unit area, and combustion performance must be in the same report.