



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

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Code for design of timber structures

木结构通用规范

(English Translation)

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1 General

1.0.1

This specification is hereby formulated, in order to ensure the quality and safety of timber structure projects, implement resource conservation and environmental protection policies, ensure the safety of people's lives and property and personal health, improve the sustainable development level of timber structure projects.

1.0.2

Timber structure engineering must implement this specification.

1.0.3

Whether the technical methods and measures, which are adopted in the project construction, meet the requirements of this specification, shall be determined by the relevant responsible entities. Among them, innovative technical methods and measures shall be demonstrated, to meet the relevant performance requirements in this specification.

2 Basic provisions

2.0.1

The safety level of timber structure and its components shall not be less than level 3. When the safety levels of structural members and components are inconsistent with that of the structures, they shall be clearly marked in the design documents.

2.0.2

The design service life of timber structure shall meet the following requirements.

2.0.5 For the design, construction, supervision, inspection, supervision and

other work of timber structure engineering, it shall unify the measurement standards; when timber structure is constructed, it shall check the structural bearing capacity and stability of each construction process stage.

3 Materials

3.0.1

The timber structure shall adopt square timber, logs, sawn timber, engineered timber products, which have clear material grade or strength grade.

3.0.2

The moisture content of structural timber shall meet the requirements for design, production, installation of timber structure.

3.0.5

The steel used in the timber structure shall meet the following requirements.

3.0.6

In addition to meeting the requirements of Article 3.0.5 of this specification, the metal connectors, which are used in the timber structure, shall also provide a product quality certificate. The cast steel connectors shall also have a qualified guarantee for the reduction of cross-sectional area. Stainless steel connectors shall also have the qualified guarantee of nominal yield strength, tensile strength, elongation, content of carbon, nickel, chromium, molybdenum.

4.1 Structural system

4.1.1

The structural analysis shall meet the following requirements.

4.1.2

When the timber structure is designed, according to the ultimate state of bearing capacity, it shall meet the following requirements.

4.2 Component design

4.2.1

The axially stressed members and eccentrically stressed members shall be subject to strength calculations. Axially compressed members and compression-bending members shall be subjected to stability verification, to ensure that the members meet the strength and stability requirements.

4.2.4

The design of timber shear wall shall meet the following requirements.

4.2.5

Floor (roof) slab's design shall meet the following requirements.

4.2.6

For the shear walls and diaphragms of light timber structures, that do not conform to the structural design method, they shall be designed according to the calculation results.

4.4 Anti-seismic and anti-wind design

4.4.1

For light timber structure buildings, which have 3 and less floors, when the following conditions are met, the anti-seismic and anti-wind design shall allow the use of structural design methods.

4.4.4

For the timber mixed structure, whose upper part is timber structure AND the lower part is other structures, the connection shall be subject to strength, local compression, aseismic design of pullout action.

5.1 Waterproof and moisture-proof

5.1.1

The parts of the timber structure, that are susceptible to moisture and humidity erosion, shall take structural measures, such as waterproof and moisture-proof. Meanwhile it shall meet the following requirements.

5.1.4

It shall provide drainage measures, around the outdoor floor of a timber structure building. It shall take waterproof and moisture-proof measures, for the basement and the overhead layer of the ground floor.

5.2 Prevention of termite hazards

5.2.1

For the division of the area of timber structure buildings, which are affected by termites, it shall be determined according to the degree of termite damage, based on Table 5.2.1.

5.3 Anticorrosion

5.3.1

Timber structures shall take corresponding chemical anti-corrosion treatment measures, according to the use environment. Under the following use environment conditions, structural timber shall be subject to the anti-corrosion treatment.

5.3.4

The structural timber, which is used in the timber structure bridge, shall be subject to anticorrosion treatment.

5.4 Fire protection

5.4.1

The timber structure shall be designed for the fire endurance limit of the components and the fire protection structure design of the structure.

5.4.2

The fire protection of timber structures shall meet the following requirements.

5.4.3 Timber, timber components, wood products and other flammable

materials, which are stacked on the construction site of the timber structure, shall be kept away from the fire source. The storage location shall be upwind from the fire source. Open flame operation is strictly prohibited.

5.4.4 It shall adopt fire prevention measures or fire-fighting equipment, at the construction site of timber structure engineering.

6 Construction and acceptance