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

GB 12987-2008

Replacing GB 12987-1997; GB 15230-1994

**Concrete hollow floor slab and complete sets for village
constructs**

乡村建设用混凝土圆孔板和配套构件

(English Translation)

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Table of Contents

Introduction

Introduction

1 Scope

2 Normative references

3 Category

4 Raw material

5 Technical requirements

6 Test methods

7 Inspection rules

8 Factory certification

9 Signs, stacking and transport

Appendix A (normative) Test Method balcony mechanical properties of the beam

1 Hole plate appearance

4 Flat-shaped treads shape

Foreword

Chapter 5 of this standard is mandatory, the rest are recommended.

This standard replaces GB 12987-1997 "rural housing hole with concrete board" and GB 15230-1994 "concrete supporting rural housing member." the main differences between this standard and GB 12987-1997 and GB 15230-1994 are.

Name --- standard was revised to "rural construction with a concrete slab and a supporting member hole";

--- Standards include rural construction with concrete hole plate and rural construction with concrete supporting member;

--- Increased introduction;

--- Added some normative references;

--- Modified tag example;

--- Cancel the original standards and classification requirements;

--- Increasing the prestressing requirements (5.4) and the contents of the original national standard GB 12987-1997 included in Appendix A;

- Factory inspection items unified concrete strength, size and appearance quality deviation;
- Delivery inspection batch adjusted to GB 50204-2002 consistent quality appearance and size bias is adjusted to the number of test 10;
- Increasing the compressive strength of concrete project determined the frequency of the sample make provisions, and clearly monthly assessment;
- Balcony mechanical properties of the beam test method to modify the standard in Appendix A.

Appendix A of this standard is a normative appendix.

The standard proposed by China Building Materials Federation.

This standard by the National Standardization Technical Committee cement products (SAC/TC197) centralized.

Introduction

Production and use of rural construction hole with concrete slab and concrete structures, fixtures history for decades, since the beginning of the 1970s, Reinforced concrete hole plate hole prestressed concrete slab, reinforced and prestressed concrete door, window lintels, stair treads, and mixed Balcony concrete beam supporting member is in the countryside, towns built in housing construction has been widely used. In order to regulate rural housing hole with concrete slab and production support member, released in 1991, China's first GB 12987-1991 "rural housing hole with concrete slab," and in 1997 for the revised standard, revised standard GB 12987-1997 "rural housing hole with concrete board"; China issued in 1994 GB 15230-1994 "concrete supporting rural housing member" standard. Rural housing has been released more than a decade with a concrete slab and a supporting member hole standard.

Because of the design specifications, standards-based format and other changes have been made, the original standards for content does not meet the requirements, coupled with the two products are rural construction Concrete component product, test items, and so have many of the same judgment, issued a mandate for this country, requires the integration of these two standards Amendments.

In urban construction, since the building floors high, strict seismic requirements and other reasons, the concrete hole plate has been used less; but in the Rural Construction, Concrete hole plate and the supporting member due to a reasonable structure, easy installation, low construction costs, construction progress fast and so, still is the most important Building materials. As China's construction technology and raising the level of housing construction commonly used to further improve the seismic design of concrete round and the role of the orifice plate supporting member in the Rural Construction will play

more and more.

We believe with the national standards of product quality integration amend and enact the implementation of rural construction control board and the hole with concrete supporting member the amount of attention and forcing the production plants around the implementation of the standards authorities, building a harmonious society will have a profound impact, so that Concrete hole plate and the supporting member to better serve new socialist countryside construction.

Rural construction hole with concrete panels and supporting member

1 Scope

This standard specifies the rural construction with concrete hole plate (hereinafter referred to as hole plate) and a supporting member (hereinafter referred to as the supporting member) sub Class, raw materials, technical requirements, test methods, inspection rules, factory certification, marking, storage and transportation.

This standard applies to rural and township construction of housing, offices, school classrooms and other buildings used as a floor, roof and ceiling like hole Concrete panels and doors, window lintels (hereinafter referred to as lintels), balcony cantilever beam (hereinafter referred to as the balcony beams) and stair treads (hereinafter referred to as treads) and other supporting member.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 175 Common Portland Cement GB 1499.1 steel reinforced concrete - Part 1. Hot rolled steel GB 1499.2 steel reinforced concrete - Part 2. Hot rolled ribbed bars GB/T 5223 prestressed concrete steel wire GB 8076 concrete admixture GB 13788 cold rolled ribbed bar GB/T 14684 building sand GB/T 14685 building pebbles, gravel GB 50010 Design of Concrete Structures GB/T 50081-2002 ordinary concrete mechanical performance test method standards GB 50119 concrete admixture technical specifications GB 50164 concrete quality control standards Construction quality concrete structures GB 50204-2002 acceptance GB J107 Concrete Strength Inspection and Evaluation Standards JC/T 540 concrete products cold drawn low carbon steel wire JC/T 624 rural housing component quality concrete detection method JGJ55 ordinary concrete mix design procedures JGJ63 concrete water standards JGJ95 cold rolled ribbed bar design concrete structures Category

3.1 Varieties

Variety and code in Table 1.

Table 1 Variety and code

Variety Code

Hole plate

Prestressed concrete hole plate (hereinafter referred to as prestressed plate) NYKB
Reinforced concrete hole plate (hereinafter referred to as non-prestressed plate) NGKB
Supporting member Lintel Prestressed concrete lintel (hereinafter referred to as prestressed lintels) YGL Reinforced concrete lintel (hereinafter referred to as concrete lintel) GL
Balcony Beam YTL Treads Prestressed concrete L-shaped treads (hereinafter referred to as prestressed L plate) YLTB Concrete slab shaped treads (hereinafter referred to as the tablet) PTB Concrete L-shaped treads (hereinafter referred to as L plate) LTB

3.2 Level

Hole plate normal use of uniformly distributed live load standard value is divided into five levels (see Table 2). Balcony beams and treads respectively different uniform Live load standard value is divided into two levels (see Table 3), an upper lintels bear their weight and wall board passed a uniform load is divided into 6 Levels (see Table 4).

Table 2 hole board level unit is kN per square meter

Level I II III IV V

Live load standard value 1.5 2.0 2.5 3.0 3.5

Table 3 balcony beams and treads load level in units of kN per square meter

Member species

Different levels of uniformly distributed live load level I II Balcony Beam 2.5 3.5 Treads 1.5 2.0

Table 4 lintel load level units kN per meter

Level I II III IV V VI Wall heavy load combination $G + 5 G + 10 G + 15 G + 20 G + 25$ Note.
The table refers to the lintel upper part $G \frac{1}{3}$ Net weight across the height of the wall, (5 ~ 25) kN/m refers to the board passed uniformly distributed load.

3.3.1 Outline

3.3.1.1

hole plate shape shown in Figure 1.