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JG

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

JG/T 197-2018

Replacing JG/T 197-2006

**Prestressed spun concrete square piles
(English Translation)**

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Table of Contents

- Foreword
- 1 Scope
- 2 Normative references
- 3 Classification and marking
 - 3.1 Classification and code
 - 3.2 Specifications

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces JG 197-2006 "Prestressed Concrete Hollow Square Pile". The main technical changes in this standard compared with JG 197-2006 as follows.

- Revised scope (see Chapter 1, Chapter 1 of the 2006 edition);
- Increased classification of hollow square piles (see 3.1);
- Adjust the specifications of hollow square piles (see 3.2.2, 3.3.1 of 2006 edition);
- Adjusted the marking of hollow square piles (see 3.3, 3.4 of 2006 edition);
- Adjusted the quality requirements for aggregates, steel, admixtures and other materials (see 4.2, 4.3, 4.6, 4.1 edition of 2006);
- Increased the minimum thickness requirements for end plates and end plates (see 4.3.3);
- Adjusted the minimum reinforcement ratio of prestressed steel bars (see 5.2.1, 4.2.2.1 of 2006 edition);
- Adjusted stirrups (see 5.2.2, 5.2.3, 2006 edition 4.2.2.2, 4.2.2.3);
- Increased durability requirements for hollow square piles (see 5.4);
- Increase the bearing capacity requirements of the hollow square pile (see 5.5);
- Adjust the requirements for compressive strength of concrete when laying prestressed steel bars (see 6.3.1, 5.1.3 of 2006 edition);
- Adjusted the thickness of the concrete protective layer of prestressed steel (see 6.1, 5.2 of 2006 edition);
- Adjusted the requirements for the appearance quality and dimensional tolerance of

hollow square piles (see Table 3, Table 4, Tables 2 and 3 of the 2006 edition);

--- Adjusted the bending resistance of hollow square piles (see Table 5, Table 4 of the 2006 edition);

--- Increased the shear resistance of hollow square piles (see 6.6);

--- Adjusting the inspection tools and inspection methods for the thickness, appearance quality and dimensional tolerance of the concrete protective layer of hollow square piles (see

Table 7, Table 5 of the 2006 edition);

--- Increased test method for concrete compressive strength (see 7.4.2);

--- Increased inspection classification (see 8.1);

--- Increased the calculation method for effective pre-stress of hollow square piles (see Appendix A);

--- Added test method for shear performance of hollow square piles (see Appendix C).

This standard was proposed by the Institute of Standardization of the Ministry of Housing and Urban-Rural Development.

This standard is under the jurisdiction of the Ministry of Housing and Urban-Rural Development.

1 Scope

This standard specifies the classification and marking, materials, general requirements for pre-tensioned prestressed concrete hollow square piles (hereinafter referred to as hollow square piles).

Requirements, test methods, inspection rules, signs, product certification, stacking, hoisting and transportation.

This standard is applicable to centrifugally formed pretensioned prestressed concrete hollow square piles used in industrial and civil construction, municipal and other projects.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB 175 universal Portland cement GB/T 700 carbon structural steel GB/T 701 low carbon steel hot rolled strip GB/T 1499.2 Steel for reinforced concrete - Part 2. Hot rolled ribbed

bars GB/T 1596-2017 Fly ash used in cement and concrete GB/T 5223.3-2017 steel bars for prestressed concrete GB 8076 concrete admixture GB/T 14684 construction sand GB/T 14685 construction pebbles, gravel GB/T 18046-2017 Granulated blast furnace slag powder for cement, mortar and concrete GB/T 18736-2017 mineral admixture for high strength and high performance concrete GB 50010-2010 Specification for concrete structure design GB/T 50081 Standard test method for mechanical properties of ordinary concrete GB/T 50107 concrete strength inspection and evaluation standard GB 50164 concrete quality control standard JC/T 950-2005 Silica sand powder for prestressed high strength concrete pipe pile JC/T 2239 end plate for prestressed centrifugal concrete hollow square pile JG J19 cold drawn low carbon steel wire application technical regulations JG J63 concrete water standard

3.1 Classification and code

Hollow square piles are divided into prestressed high-strength concrete hollow square pile C80 (code PHS) and prestressed concrete empty according to concrete strength grade.

Heart square pile C60 (code PS).

3.2 Specifications

3.2.1

Schematic diagram of the hollow square pile is shown in Figure 1.