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

GB/T 19496-2026

Replacing GB/T 19496-2004

**Test method for the compressive strength of spun
high-strength concrete by core drilling**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 19496-2004 "Test Method for Compressive Strength of Centrifuged High-Strength Concrete by Core Drilling", and is consistent with GB/T 19496- Compared to.2004, aside from structural adjustments and editorial changes, the main technical changes are as follows:

a) The term "inner core sample" (see

3.7 in the.2004 edition) was deleted, the term "core sample specimen" was added (see 3.3), and "centrifugal height" was changed. "High-strength concrete", "core sample", "core sample flatness", "core sample parallelism", "core sample perpendicularity", "core sample cylindricity" Terms and definitions for "estimated compressive strength of concrete in core specimens" (see 3.1, 3.2, 3.4~3.8, 3.1~

3.6 in the.2004 edition). 3.8);

b) A new chapter on "Experimental Conditions" has been added (see Chapter 4);

c) The requirements for instruments and equipment have been changed (see Chapter 5, Chapter 4 of the.2004 edition);

d) The requirements for core sampling have been changed (see 6.1, Chapter 5 of the.2004 edition);

e) The requirements for core sample sawing and core sample grinding have been changed (see 6.2, 6.3, and 6.4~

6.6 in the.2004 edition);

f) The measurement requirements for the geometric dimensions and form and position tolerances of the core specimens have been changed (see 6.4,

6.8 in the.2004 edition);

g) The compressive strength test procedure has been changed (see Chapter 7, Chapter 7 of the.2004 edition);

h) The method of processing experimental data has been changed (see Chapter 8, Chapter 8 of the.2004 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China Building Materials Federation. This document is under the jurisdiction of the National Technical Committee on Standardization of Cement Products (SAC/TC197). This document was drafted by: Suzhou Concrete and Cement Products Research Institute Co., Ltd., Jiaxing University, and Guangdong Wengu Testing and Appraisal Co., Ltd. Suzhou Concrete and Cement Products Research Institute Testing Center Co., Ltd., Guangdong Youpeng Building Materials Co., Ltd., and Guangxi Wankai New Material Technology Co., Ltd. Company, Ningbo Zhongchun High-Tech Co., Ltd., Guangdong Sanhe Pipe Pile Co., Ltd., Zhejiang Zhengda Pipe Pile Co., Ltd., Zhejiang Zhenghao Engineering Research Research Institute Co., Ltd., Anhui Jinmeiya New Building Materials Group Co., Ltd., Shanghai Jianke Inspection Co., Ltd., Zhejiang Yili Pipe Industry Technology Co., Ltd. Guangdong Hongye Building Materials Technology Co., Ltd., Tianjin Tianzhuang Building Materials Technology Co., Ltd., Jiangsu Anfang Electric Power Technology Co., Ltd., Guangdong Quanke Engineering Testing Co., Ltd., Xinjiang Road & Bridge North Xinjiang Engineering Construction Co., Ltd., China Railway Construction Port & Navigation Bureau Group Co., Ltd., Quanzhou Municipal Construction Engineering Quality Safety Station, Jiaxing Municipal Water Conservancy Engineering Construction Co., Ltd., Tianjin Survey and Design Institute Group Co., Ltd., Shanghai Port Engineering Quality Inspection Limited Liability Company, Suzhou Hengxin Construction Technology Development and Testing Co., Ltd., China Railway 19th Bureau Group Co., Ltd., Zhejiang Chenxin Machinery Equipment Co., Ltd. Company, Baisheng United Group Co., Ltd., China

Railway 24th Bureau Group Co., Ltd., Jiashan County Product Quality Supervision and Inspection Institute, Guangxi Nonferrous Exploration and Design Institute Design Institute Co., Ltd., Xinjiang Qiankun Engineering Construction Group Co., Ltd., Shanghai Qianweijia Construction Technology Co., Ltd., Shandong Linmin Company Road Materials Co., Ltd., Shanghai Tongfeng Engineering Consulting Co., Ltd., Zhongyuan Construction Group Co., Ltd., Shandong Qisheng New Materials Co., Ltd. Company. Zhejiang Zhongcheng Cement Pipe Pile Co., Ltd. The main drafters of this document are. Tian Yin, Jiang Yuanhai, Luo Jingjing, Yu Feng, Xu Xiaodong, Li Mingliang, Xiang Anle, Yan Tianlong, Teng Yaohua, and Zhou Zhuoping. Gao Haorong, Huang Qinghui, Zhang Yuyang, Qi Jinliang, Zhou Yiyu, Wang Jun, Ye Fei, Chen Xiaoliang, Shi Fudi, Yang Junyi, Xiong Houren, Lin Changhua, Feng Xingzhuo Xi Jianjun, Guo Jing, Weng Dunxian, Lu Song, Liu Yongxiang, Duan Jun, Yang Jinrui, Wu Yuhao, Sun Yangbo, Xing Kaijian, Yin Cheng, Xu Hong, Fu Qiang, Li Qiong Li Huiying, Gong Xiaofei, Peng Lidan, Huang Dianwu, Liu Hongfei, Lin Hai, Ruan Shenglin, Zhang Yongxiao, Huang Wei, Lü Xiangyang, Tang Xing, Qiao Hengxuan, Yan Zhaozhen Yuan Gaoshun, Tie Dong, Yang Baohua, Qiu Liang, Li Feifei, Wang Zhongliang, Zhu Jieqi. This document was first published in 2004, and this is its first revision. Core drilling to test the compressive strength of centrifuged high-strength concrete Test methods

4 Test conditions

4.1 Rebar detectors, core drills, core sample saws, core sample grinders, integrated core sample sawing and grinding machines, and pressure testing machines should all have product certifications. Certificate.

4.2 Operators should be familiar with the instruments and equipment and safe operating procedures, and should only perform core sample drilling, core sample sawing, core sample grinding, and core sample pressure testing after training. Operations such as temperature testing.

4.3 The relative humidity of the laboratory environment should not be less than 50%, and the temperature should be maintained at $20^{\circ}\text{C}\pm 5^{\circ}\text{C}$.

4.4 Before the compressive strength test, the core specimen should be left to stand in the test chamber for no less than 48 hours.

5.1 Measuring instruments

5.1.1 Measuring instruments shall have verification or calibration certificates and be within their validity period.

5.1.2 Knife-edge rulers shall conform to the requirements of GB/T 6091.

5.1.3 Vernier universal angle gauges shall conform to the provisions of GB/T 6315.

5.1.4 Metal rulers shall conform to the provisions of GB/T 9056.

5.1.5 Calipers shall conform to the provisions of GB/T 21389.

5.1.6 Height calipers shall conform to the requirements of GB/T 21390.

5.1.7 Feeler gauges shall conform to the requirements of GB/T 22523.

5.2 Rebar Detector The maximum detection depth should be no less than 60 mm, and the detection position deviation should preferably be no greater than ± 2 mm.

5.3 Core Drilling Machine

5.3.1 It should have sufficient rigidity, be flexible in operation, easy to fix and move, and should have a water cooling system.

5.3.2 The power should be no less than 3kW and the speed should be no less than 700r/min.

5.3.3 The radial runout deviation of the spindle should be less than 0.05 mm, and the axial runout deviation should be less than 0.1 mm.

5.3.4 The drill bit should preferably be a thin-walled cylindrical drill bit made of diamond or synthetic diamond as specified in JC/T 816, with an inner diameter of 70mm~100mm. There are no visible cracks, missing edges, missing corners, tilting, or flared mouth deformation.

5.3.5 The coaxiality deviation between the drill bit and the drill shaft of the drilling rig should not exceed

0.3 mm, and the radial runout deviation of the drill bit should not exceed

5.3.6 Other requirements for core drilling machines shall comply with the provisions of GB/T 3883.306.

5.4 Core Sample Sawing Machine

5.4.1 A water cooling system and a device for clamping the core sample should be provided.

5.4.2 There should be a control device for parameters such as the rotation speed of the circular saw blade and the sawing feed stroke speed.

5.4.3 It is advisable to have a double-blade automatic sawing mechanism.

5.4.4 The rigidity of the circular saw blade used in conjunction with the equipment shall comply with the requirements of JC/T 340.