

ICS 79.060.99

CCS B 70



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

GB/T 37805-2019

Bamboo winding composite pipes

竹缠绕复合管

Issued on: August 30, 2019

Implemented on: March 1, 2020

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	2
4 Classification and Marking 2 5 raw materials	3
6 Technical requirements	5
7 Test method	12
8 Inspection rules	15
22 Appendix D (informative) Pipe fitting technology	24

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard was proposed by the National Forestry and Grassland Bureau. This standard is under the jurisdiction of the National Bamboo and Rattan Standardization Technical Committee (SAC/TC263). This standard was drafted. Zhejiang Xinzhou Bamboo-based Composite Materials Technology Co., Ltd., China Engineering Construction Standardization Association, China Railway Construction Corporation Co., Ltd., International Bamboo and Rattan Center, China Institute of Water Resources and Hydropower Research, Shanghai Municipal Engineering Design and Research Institute (Group) Co., Ltd., Zhongshui Northern Survey and Design Research Co., Ltd., Sinopec Petroleum Engineering Design Co., Ltd., Heilongjiang Institute of Hydraulic Research, Xinjiang Corps Survey and Design Institute (Group) Co., Ltd., Zhejiang Water Resources and Hydropower Survey and Design Institute, Zhejiang Urban and Rural Planning and Design Institute, Beijing Municipality Political Engineering Design and Research Institute General Hospital Co., Ltd., China Railway 18th Bureau Group Co., Ltd., Daxie Water Conservation Group Co., Ltd., Ningbo Qifeng Automobile Car Parts Co., Ltd. The main drafters of this standard. Ye Wei, Lei Shengxiang, Fei Benhua, Gao Zhanyi, Song Qizhen, He Ming, Gao Benhu, Si Zhenjiang, Bai Xinhua, Weng Yi, Zhang Shuzhen, Zhang Yongjin, Wang Ge, Lang Qingshan, Peng Xiajun, Ding Hui, Wang Xinzong, Gao Yong, Wang Jian, Chi Jianjun, Xu Huichun, Jin Xueqin, Huang Xin, Li Qingbin, Wu Chenxu, Su Anshuang, Wang Jiawei, Sun Yuanping, Wang Dong, Wang Chenghua, Yao Yiheng, Li Peng, Lu Qi. Bamboo winding composite pipe

1 Scope

China's national standard for bamboo winding composite pipe. It specifies the terms and definitions, the classification and marking, the raw materials, the technical requirements,

the test methods and the inspection rules. The pipe is made by winding bamboo strip helically with a thermosetting resin, the same way a glass fibre pipe is filament wound, using bamboo as the reinforcement in place of glass. It is a genuinely Chinese engineering answer to a Chinese circumstance: bamboo is abundant, renewable on a three to five year cycle, and its fibre has a specific tensile strength comparable with glass. The resulting pipe is light, corrosion-proof, and made largely from a material that sequestered carbon while growing. It is used for water supply, drainage and irrigation mains in the larger diameters where the alternative would be concrete or ductile iron. What the standard has to control is the variability of a natural reinforcement and the resin content that determines whether the wall performs.

This standard specifies the terms and definitions, classification and marking, raw materials, technical requirements, and tests of bamboo-wound composite pipes (hereinafter referred to as bamboo composite pipes). Inspection methods, inspection rules, factory certificates, packaging, transportation, storage, etc. This standard applies to the nominal inner diameter of 150mm~3000mm, the pressure grade is not more than 1.6MPa, and the ring stiffness grade is 5000N/m²~ 20000N/m², application environment temperature -40 ° C ~ 80 ° C, the maximum temperature of the transport medium is not more than 90 ° C water, municipal, industrial water supply and drainage Bamboo-wound composite pipe for water engineering.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document. Rubber and rubber -- Determination of hardness of indented rubber - Part 1 . Shore hardness test method (Shore hardness)

GB/T 1034 Determination of water absorption of plastics

GB/T 1446-2005 General rules for testing performance of fibre reinforced plastics

GB/T 1447-2005 Test method for tensile properties of fiber reinforced plastics

GB/T 1449 fiber reinforced plastic bending performance test method Test method for mechanical properties of

GB/T 1458 filament wound reinforced plastic ring specimen

GB/T 1725-2007 Determination of non-volatile content of paints, varnishes and plastics

GB/T 2567-2008 resin casting body performance test method

GB/T 2576 fiber reinforced plastic resin insoluble content test method

GB/T 2794-2013 Determination of viscosity of adhesives - Single cylinder rotary viscometer

GB/T 2895-2008 Determination of partial acid value and total acid value of plastic polyester resin

GB/T 3139 fiber reinforced plastic thermal conductivity test method

GB/T 4380 roundness error evaluation two-point, three-point method

GB/T 5351 fiber reinforced thermosetting plastic pipe short-time water pressure failure pressure test method

chinastandards.org - PREVIEW