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

GB/T 47056-2026

Bamboo winding utility tunnels

竹缠绕管廊

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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. 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 National Forestry and Grassland Administration. This document is under the jurisdiction of the National Bamboo and Rattan Standardization Technical Committee (SAC/TC263). This document was drafted by: Zhejiang Xinzhou Bamboo-based Composite Materials Technology Co., Ltd., and Shanghai Municipal Engineering Design & Research Institute (Group) Co., Ltd. Company, International Bamboo and Rattan Centre, Ministry of Water Resources of the People's Republic of China, National Energy Conservation Center, Science and Technology Promotion Center of the Ministry of Water Resources, Ministry of Housing and Urban-Rural Development Technology and Industrialization Development Center, Tongji University Architectural Design & Research Institute (Group) Co., Ltd., China Railway Construction Corporation Limited, China Water Resources and Hydropower Engineering Corporation Electric Power Research Institute, Sichuan Fire Research Institute of the Ministry of Emergency Management, Industrial Development Planning Institute of the National Forestry and Grassland Administration, China Forest Products Industry Association China Railway Fifth Survey and Design Institute Group Co., Ltd., China Railway 18th Bureau Group Co., Ltd., China Railway Jianzhu Winding Development Co., Ltd., and China Economic Urban Investment Group Co., Ltd. Construction Group Co., Ltd., Beijing Railway Research and Construction Supervision Co., Ltd., Guangdong Provincial Transportation Planning and Design Institute Group Co., Ltd. Zhejiang Provincial Building Materials Group Co., Ltd., China Construction Seventh Engineering Bureau Co., Ltd.,

Zhejiang Agriculture and Forestry University, China Municipal Engineering Southwest Design and Research Institute General Hospital Co., Ltd. The main drafters of this document are. Ye Ling, Wang Hengdong, Fei Benhua, Wang Ge, Sun Gongxin, Pang Jinwu, Lei Shengxiang, Yan Guangtian, Peng Shiguo, and Peng Xiajun. Xiao Jinfeng, Zhu Lingyan, Gao Hong, Xiao Xinmin, Lu Hongwei, Qi Lian, Qiao Bida, Zuo Zhanyi, Gao Benhu, Wang Yin, Zhang Fangyuan, Wang Yu, Mao Chaojun, Gui Xing Wang Guoyou, Li Jia, Gao Yong, Zhang Nan, Ren Weilai, Chen Xiaoyang, Zou Shuiming, Xing Liang, Xiang Huanping, Liu Yingying, Hai Zhanzhong. Bamboo-wrapped pipe gallery

1 Scope

GB/T 47056-2026 is the Chinese national standard covering the utility tunnel made by winding bamboo fibre in resin - a Chinese invention that replaces concrete or steel with a fast-growing plant, used for buried service galleries and pipe jacking. It fixes the materials and the winding, the structural design and the loads it must carry buried, the joints, the durability and the tests. First edition, 19,000 words, under the National Forestry and Grassland Administration. It was issued on 28 January 2026 and has been in force since 1 August 2026, as a first edition. The document is under the responsibility of the National Forestry and Grassland Administration. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document defines the terminology and definitions for bamboo-wound pipe galleries, and specifies the classification and marking, technical requirements, inspection rules, marking, lifting and transportation procedures. The terms "transportation" and "storage" describe the experimental methods. This document applies to products made from bamboo as the base material using a winding process, suitable for municipal and electrical applications in environments with temperatures ranging from -40°C to 80°C. The integrated utility tunnel in the excavation and burial of utility tunnels.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 1447 Tensile Properties Test Method for Fiber Reinforced Plastics

GB/T 1448 Test method for compressive properties of fiber-reinforced plastics

GB/T 1463 Test methods for density and relative density of fiber-reinforced plastics

GB/T 4380 Evaluation of roundness error. two-point and three-point methods

GB/T 5352 Test Method for External Load Performance of Fiber Reinforced Thermosetting Plastic Pipes in Parallel Plates

GB 8624 Classification of fire performance of building materials and products

GB/T 8626 Test Methods for Flammability of Building Materials

GB/T 9978.1 Fire resistance test methods for building components - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Made using bamboo as the base material and amino-based water-soluble thermosetting non-combustible resins as adhesives, this product employs a winding process and includes a fire-resistant layer. The pipe gallery consists of a structural layer and an outer protective layer. Note

1.The fireproof layer is a structural layer that covers the inside of the structural layer to enhance the fire resistance of the utility tunnel. Note

2.The bamboo-wrapped pipe gallery structure has three layers, as shown in Figure 1.