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PEOPLE'S REPUBLIC OF CHINA**

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**Terminology, classification and model designation for complete
sets of fibre chemical equipment**

纤维碳化生产成套装备的术语、分类及型号编制方法

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the China National Textile and Apparel Council. This document is under the jurisdiction of the National Technical Committee for Standardization of Textile Machinery and Accessories (SAC/TC215). This document was drafted by: Zhejiang Jinggong Integrated Technology Co., Ltd., Xinchuang Carbon Valley Group Co., Ltd., Weihai Guangwei Precision Machinery Co., Ltd., Xi'an Furuida Technology Development Co., Ltd., Hengtian Heavy Industry Co., Ltd., Jilin Chemical Fiber Group Co., Ltd., Modern Textile Technology Innovation Center (Jianhu Laboratory), Zhejiang Fangzheng Light Textile Machinery Testing Center Co., Ltd., Zhejiang Wanli Carbon Fiber Intelligent Equipment Co., Ltd. Co., Ltd., Huzhou Modern Textile Machinery Co., Ltd., Donghua University, China Chemical Fiber Industry Association, and China Textile Machinery Association. The main drafters of this document are. Hou Xi, Ye He, Li Shujia, Wu Zhenyu, Sun Guojun, Tan Yuan, Hu Hongbo, Jiang Yuanhu, Li Ruixia, Fu Jiagen, Zhou Xiangqin, Liu Yonghua, Lü Jiabin, Zhang Zhijun, Wang Haiping, Yuan Haiping, Ren Jie, Lu Ming, Qiao Zhihong, Wei Bin, Yu Mingxing, Lü Shan, Yang Zhi, Mao Yadong, Bai Xianrong. Terminology, classification and application of complete equipment for fiber carbonization production Model compilation method

1 Scope

China's national terminology, classification and model designation for complete sets of chemical fibre equipment. China produces the majority of the world's synthetic fibre, and much of the machinery that makes it - the polymerisation plant, the spinning lines, the drawing and texturing machines - is now built in China and exported. A complete set means the whole production train supplied together rather than machine by machine, which is how

such plants are bought. What the standard supplies is the vocabulary and the model coding that makes such a contract precise: the machine types and their variants, the parameters that define capacity and product range, and a designation that encodes them. That last is what allows an engineering company, a buyer and a financier in three countries to refer to the same installation unambiguously, which for a plant costing hundreds of millions is not a formality.

This document defines the terminology of complete sets of fiber carbonization production equipment and specifies the classification and model compilation method of complete sets of fiber carbonization production equipment. This document is applicable to complete sets of equipment for pre-oxidation and carbonization of polyacrylonitrile fiber to produce carbon fiber, other fiber carbon. The same shall apply to complete sets of chemical production equipment.

2 Normative references

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 General

3.1.1 Polyacrylonitrile fibers for carbonization production. [Source: GB/T 40724-2021, 3.3, modified]

3.1.2 Pre-oxidized fiber Fibers obtained by pre-oxidation (3.4.4) of raw silk (3.1.1). [Source: GB/T 40724-2021, 3.20, modified]

3.1.3 Carbon fiber Fibers with a carbon content exceeding 90% (mass fraction) obtained by pyrolysis and reorganization of pre-oxidized yarn (3.1.2). [Source: GB/T 40724-2021, 3.1, modified]

3.1.4 Graphite fiber Carbon fiber (3.1.3) is a fiber that has been graphitized (3.4.6) and has a carbon content of not less than 99% (mass fraction). [Source: GB/T 40724-2021, 3.2, modified]

3.1.5 Through pre-oxidation (3.4.4), low temperature carbonization, high temperature carbonization, graphitization (3.4.6), surface treatment (3.4.7), water washing (3.4.8), water washing and drying The raw silk is processed through a series of processes including drying (3.4.9), sizing (3.4.10), drying after sizing (3.4.11), shaping (3.4.12), and collecting (3.4.13). The process of processing silk (3.1.1) into carbon fiber (3.1.3).

Note. Some carbonization production does not have graphitization treatment.