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

GB/T 45755-2025

Pultrusion dies for fibre reinforced composite panels

纤维增强复合材料板材拉挤成型模

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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 is proposed and coordinated by the National Technical Committee for Mould Standardization (SAC/TC33). This document was drafted by: Changzhou Xinchuang Intelligent Technology Co., Ltd., Anhui Zhongteng Auto Parts Co., Ltd., Zhengzhou University, Xiamen Wei Kemou Plastic Technology Co., Ltd., Taizhou Huangyan District Metrology and Product Quality Safety Testing Institute, Guilin Electric Science Research Institute Co., Ltd. Shanghai Jiaotong University, Henan Zhongke Intelligent Equipment Co., Ltd., Tsinghua University, Beijing Glass Steel Institute Composite Materials Co., Ltd., Shenzhen Changfeng Laser Die Co., Ltd., Tianjin Jinzhao Electromechanical Development Co., Ltd., Suzhou Benro Precision Technology Co., Ltd., Zhejiang Wanli Carbon Fiber Wei Intelligent Equipment Co., Ltd., Ningbo Yongling Aviation Technology Co., Ltd., Shandong Dingsheng Composite Materials Technology Co., Ltd., Ganzhou Qilin New Materials Co., Ltd., Guangdong Donghua Optoelectronics Technology Co., Ltd., Nantong Chaoda Equipment Co., Ltd., Yantai Zhenghai Hetai Technology Co., Ltd. Company, Suzhou Dongfang Mould Technology Co., Ltd., Guangzhou Lanshen Technology Co., Ltd., Zhejiang Sote Heavy Industry Technology Co., Ltd., Changzhou College. The main drafters of this document are: Qian Yagang, Yang Jun, Huang Ming, Zhuang Huiyang, Gu Shilin, Jiang Mingzhou, Zhang Wen, Wen Yunshou, Feng Peng, Zhang Weijun, Yang Mingwei, Jiang Lizhong, Lin Feng, Wan Fengyun, Ye Can, Yuan Tianyu, Zhou Fengguang, Zhang Guojun, Wu Hao, Zhao Xuefeng, Ge Jianming, Chen Huaqiu, Wang Min, Zhang Weisong, Liu Shihai, Yang Liu, Yang Ting, Zhu Yubin, and Qiao Zhihong. Fiber reinforced composite material sheet pultrusion die

1 Scope

China's national standard for the pultrusion dies used to make fibre reinforced composite panels. Pultrusion pulls reinforcement continuously through a resin bath and then through a heated steel die where the resin cures, producing a constant-section profile at a steady rate, and the die is the whole process: it consolidates the fibres, sets the shape, and provides the heat and dwell in which the resin gels and hardens. Its design decides everything that matters. Too short and the resin leaves uncured; the wrong temperature profile and it gels at the entry and jams; a poor surface or the wrong taper and the part sticks and tears. Panels for wind turbine spar caps are now made this way in very large volumes, which is why the tooling has become a standardised article rather than a bespoke one. The standard specifies the die's structure, parts, assembly and performance requirements, the test methods, the inspection rules, marking, packaging, transport and storage.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 191 Pictorial markings for packaging, storage and transportation

GB/T 230.1 Rockwell hardness test for metallic materials Part

GB/T 1184-1996 Shape and position tolerances without tolerance values

GB/T 1804-2000 General tolerances Tolerances of linear and angular dimensions without tolerance indication

GB/T 1958 Geometrical Product Specifications (GPS) Geometric Tolerance Testing and Verification

GB/T 3177 Product Geometric Specification (GPS) Inspection of smooth workpiece dimensions

GB/T 4340.1 Vickers hardness test for metallic materials Part

3 Terms and definitions

The terms and definitions defined in GB/T 8845 apply to this document.

4.1 Structure

4.1.1 The mold structure is shown in Figure 1.