

复合材料科学与工程

COMPOSITES SCIENCE AND ENGINEERING

2023年第2期

北玻树脂

专注航天特种树脂、高性能环氧树脂的研发创新



北京玻璃钢研究设计院
(滕州) 科技产业园



地址：山东省枣庄市滕州市木石镇羊套路558号
电话：15210355391
座机：010-61162094
网址：<http://frp.sinomatech.com>



目 次



基础研究

碳纤维胶接头仿真插件的开发与试验验证	张锦光 李弋文 等(5)
基于改进三胞模型考虑孔隙缺陷的三维四向编织复合材料多尺度力学性能分析	张 怀 李 成 等(14)
纤维网格增强砂浆加固 RC 双向板试验及承载力计算模型研究	李泳璋 吴 迪(24)
正交各向异性材料断裂分析的插值型无单元伽辽金比例边界法	王 娟 陈 杨 等(34)
基于多目标优化的控制臂碳纤维铺层研究	康元春 刘俊峰(39)
外贴预应力 CFRP 布加固钢筋混凝土梁抗弯疲劳性能有限元分析	张智梅 杨 旻(44)
一种复合材料桨叶动力学建模研究	邵 松 应旭成(54)

应用研究

纤维缠绕储氢气瓶逐层更新建模方法与性能评估	张桂明 宋春雨 等(60)
基于宏观模型的 FRP 筋纤维混凝土梁拉伸刚化效应研究	安 茹 李源康 等(67)
复合盐侵蚀-干湿耦合作用下玄武岩纤维混凝土腐蚀劣化试验	王 成 李曦彤 等(75)
未固化预浸料在热模压预成型过程中的黏弹性行为研究	李哲夫 刘卫平 等(84)
含夹杂缺陷碳纤维复合材料层压板的无损检测与评估研究	胡业发 孟 由 等(94)
起重机伸缩臂架 CFRP 轻量化材料的摩擦磨损试验研究	徐胜风 胡业发 等(101)
自动铺丝技术在飞机整体机身壁板上的应用研究	唐珊珊 何大亮 等(107)
BFRP 筋增强螺旋箍筋区域约束混凝土梁的抗剪性能试验研究	齐共成 蒋济同 等(115)
开孔玻纤拉挤板孔边应力集中	鲁晓锋 李占营 等(122)

综 述

纤维增强树脂基复合材料层合板振动性能的研究进展	周 宸 陈明达 等(126)
-------------------------------	----------------





CONTENTS



BASIC STUDY

- Development and experimental research on CFRP bonded joints plug-in ZHANG Jinguang, LI Yiwen, etc.(5)
- Multi-scale mechanical properties analysis of three-dimensional four-direction braided composites considering pore defects based on improved three-cell model ZHANG Huai, LI Cheng, etc.(14)
- Research on test and bearing capacity calculation model of two-way RC slabs strengthened with textile reinforced mortar LI Yongzhang, WU Di(24)
- Analysis of interpolating element-free Galerkin scaled boundary method for fracture problems in orthotropic materials WANG Juan, CHEN Yang, etc.(34)
- Research on carbon fiber paving of control arm based on multi-objective optimization KANG Yuanchun, LIU Junfeng(39)
- Finite element analysis of the flexural fatigue performance of reinforced concrete beams reinforced with externally bonded prestressed CFRP sheets ZHANG Zhimei, YANG Yang(44)
- Dynamic modeling investigation of a composite blade SHAO Song, YING Xucheng(54)

APPLICATION RESEARCH

- Modeling method and performance evaluation of filament-wound hydrogen storage cylinder with layer-by-layer renewal ZHANG Guiming, SONG Chunyu, etc.(60)
- Investigation of tension stiffening effect in fiber concrete beam reinforced with FRP bars based on macroscopic model AN Ru, LI Yuankang, etc.(67)
- Experimental study on corrosion degradation of basalt fiber concrete under combined salt erosion and drying-wetting coupling action WANG Cheng, LI Xitong, etc.(75)
- Investigation of the viscoelastic behavior in the hot press-forming process of uncured prepreg laminates LI Zhefu, LIU Weiping, etc.(84)
- Nondestructive testing and evaluation of carbon fiber reinforced polymer laminates with inclusions HU Yefa, MENG You, etc.(94)
- Crane telescopic boom CFRP lightweight material friction wear test study XU Shengfeng, HU Yefa, etc.(101)
- Application of composites automated fiber placement technology in aircraft integral fuselage panel TANG Shanshan, HE Daliang, etc.(107)
- Experimental study on shear performance of BFRP bars concrete beams with regional constraints QI Gongcheng, JIANG Jitong, etc.(115)
- Stress concentration at the hole edge of open-hole glass fiber reinforced pultrusion plate LU Xiaofeng, LI Zhanying, etc.(122)

REVIEW

- Research progress of the vibration performance of fiber reinforced resin matrix composite laminates ZHOU Chen, CHEN Mingda, etc.(126)

