

中国核心期刊(遴选)数据库期刊

中国建材科技

CHINA BUILDING MATERIALS SCIENCE & TECHNOLOGY

2023年第2期 总第188期



中國建築材料科學研究總院
CHINA BUILDING MATERIALS ACADEMY

科技領先 服務建設



主管主办单位：中国建筑材料科学研究院有限公司

国际标准刊号：ISSN1003-8965

国内统一刊号：CN11-2931/TU

广告经营许可证：京朝市监广登字第20170021号

出版单位：《中国建材科技》杂志社有限公司

Publishingunit:CBMSTMagazineCo.,Ltd.



社 长：张忠伦

President:ZhangZhonglun

总 编：姚 燕

Editor-in-Chief:YaoYan

执行主编：刘永民

Managingeditor:LiuYongmin

设计编审：陈 涛

DirectorofDesign:ChenTao

排 版：刘昕羊

Typesetter:LiuXinyang

编 辑 部 (Tel) : 010-51167253

广 告 部 (Tel) : 010-51167253

传 真 (Fax) : 010-51167253

地 址 (Add) : 北京市朝阳区管庄东里

邮 编 (ZipCode) : 100024

网 址: http://zgjckj.ijournals.net.cn/

出版日期：2023年4月25日

PublicationDate:April 25,2023

发 行：北京市邮政局

Issue:PostOfficeinBeijing

订 阅：全国各地邮政局

Subscribe:PostOfficeacrossthecountry

邮发代号：2-491

国外代号：BM3868

国外总发行：中国出版对外贸易公司

The total issued abroad:China National Publishing Industry Trading Corporation

定价：人民币30元美元5元

Price:RMB30.00US\$

启事：本刊编辑部保留一切版权，如欲转载，须获本刊编辑部同意。

Notice:AllrightsreservedEditor,ifreproduced,subjecttothe agreement of the editorial board.



Contents

目录

检测与认证

| | | |
|-------------------------------------|------------------------|----|
| 《绿色建材评价标准 光伏玻璃》标准解读 | 杨帆, 刘志民, 李洋, 高丹妮 | 1 |
| 常见弹性地板的临界热辐射通量检测结果研究 | 曾春燕, 熊中宝, 孙潮, 隋承鑫, 吴新泽 | 5 |
| 建筑门窗绿色建材产品认证的评价指标解析 | 张素丽, 李慧, 尚庆欢, 王烨 | 8 |
| 浅析耐碱玻璃纤维网格布耐碱断裂强力保留率测定影响因素 | 赵天福, 侯小东, 赵天欢 | 12 |
| 《建筑环境通用规范》与《民用建筑工程室内环境污染控制标准》的理解及应用 | 魏志文, 王禹 | 15 |

水泥与混凝土

| | | |
|----------------------|--------------------------------------|----|
| 不同钢渣掺量对 UHPC 性能的影响研究 | 张金成, 李广音, 白井付, 何建能, 张江涛, 王鹏, 谢丽杰, 唐旭 | 18 |
| 机制砂岩性对高强混凝土性能的影响 | 王帅兵, 范泽润, 陈迎周, 宁勇伟, 曾凡伟 | 22 |
| 快硬早强无收缩混凝土在外墙板中的应用 | 钮旋敏 | 25 |
| 微孔混凝土预制叠合板力学性能试验研究 | 甘季中, 郑旺, 王洪镇, 杨永恒, 张锌 | 29 |
| 稳塑剂对掺不同石粉湿拌砂浆性能影响研究 | 杨林, 李从号 | 33 |

综述

| | | |
|--------------------------|-------------------------|----|
| 铬铁渣集料的特性及其作为绿色混凝土材料的应用综述 | 孟庆飞, 樊肖雄, 谷立强, 张召彬, 谷志超 | 37 |
|--------------------------|-------------------------|----|

试验与研究

| | | |
|----------------------------|------------------------|----|
| 电镀污泥烧结体浸出毒性及其掺合料物理性能 | 李长成, 崔昕, 逯凡杰, 樊泽鹏, 刘啟明 | 41 |
| 气凝胶对 EPS 保温材料性能影响研究 | 马炎, 徐长伟, 张忠伦, 王明铭 | 46 |
| 癸酸 - 棕榈酸 / 膨胀珍珠岩相变石膏热学性能研究 | 李轩, 刘志成, 张逸超 | 51 |
| 动车组用聚碳酸酯前窗抗风压载荷研究 | 王国庆, 顾春雷, 曾宇, 庞世红 | 55 |

目录

| | | |
|----------------------------|-------|---------------------------|
| 混凝土裂缝修补用改性环氧树脂灌浆材料的抗冻融性能研究 | ..... | 兰富才, 叶姣凤 58 |
| 反应型灌缝胶的制备与性能研究 | ..... | 刘汉超, 林辉 64 |
| 高地应力软岩隧道超前导洞扩挖施工过程受力变形分析 | ..... | 杨泽平 68 |
| 锈蚀对低碳钢滞回性能影响分析 | ..... | 王明辉, 杨佳立, 张金昌, 李征, 秦广冲 76 |
| 基坑开挖引起临近砌体结构变形特性数值分析 | ..... | 张军, 欧阳军胜, 张环林 81 |
| 增材制造用金属粉末空心粉检测方法研究 | ..... | 蒋威 86 |
| 滇西地区水泥与聚羧酸减水剂适应性的研究 | ..... | 彭飞, 张元宝, 邓磊 89 |

技术与应用

| | | |
|--------------------------|-------|--------------------------------|
| 某自建房屋危险性鉴定 | ..... | 周建, 崔伟杰, 胡俊杰, 郭真真, 徐秋蓓 92 |
| 道桥施工中防水层技术研究 | ..... | 龚春平, 殷凡, 袁志欣, 孟晓慧, 刘鑫鑫, 邵博宇 95 |
| 某核电厂中低放固体废物整备工艺辅助系统的优化改造 | ..... | 武斌 98 |
| ECC 砂浆在商业地坪中的创新应用 | ..... | 王薇 102 |

经验交流

| | | |
|------------------------|-------|-----------------------------------|
| 我国建材生产脱碳实施路径概述 | ..... | 陈金文, 王丽, 胡国芳, 魏建勋, 管辰, 张艺, 周旭 104 |
| 浅谈水泥工业资源综合利用 | ..... | 段圆圆 108 |
| 国内外聚氨酯行业状况分析研究 | ..... | 秦颖, 张元晶, 刘新庄 110 |
| 探究市政道路桥梁工程中沉降段路基路面施工技术 | ..... | 武威 113 |

Sponsored by

ChinaBuildingMaterialsAcademy

Editor&Publisher

CBMSTMagazineCo.,Ltd.

President:ZhangZhonglun

Editor-in-Chief:YaoYan

Managing editor:LiuYongmin

Design and edit:ChenTao

Typesetter:LiuXinyang

Address

GuangzhuangEast,

ChaoyangDistrict,Beijing,China

Postcode100024

Tel.0086-10-51167253

Fax.0086-10-51167253

Http://zgjckj.ijournals.net.cn/

Ad.LicenceNo.20170021

PeriodicalRegistration

ISSN1003-8965

CN11-2931/TU

Subscription Rates

RMB30.00 per copy

USD5.00 Per copy

Contents

目 录

| | | |
|---|---|----|
| Interpretation of “Green building material assessment - Photovoltaic glass” | YANG Fan, LIU Zhimin, LI Yang, GAO Danni | 1 |
| Study on the critical heat flux test results of common resilient floors | ZENG Chunyan, XIONG Zhongbao, SUN Chao, SUI Chengxin, WU Xinze | 5 |
| Analysis of evaluation indicators for certification of green building material products for building doors and windows | ZHANG Suli, LI Hui, SHANG Qinghuan, WANG Ye | 8 |
| Analysis of the factors influencing the determination of breaking strength retention of alkali-resistant glass fiber mesh | ZHAO Tianfu, HOU Xiaodong, ZHAO Tianhuan | 12 |
| Understanding and application of GB 55016-2021 and GB 50325-2020 | WEI Zhiwen, WANG Yu | 15 |
| Influence of different content of steel slag on the properties of UHPC | ZHANG Jincheng, LI Guangyin, Bai Jingfu, HE Jianneng, ZHANG Jiangtao, WANG Peng, XIE Lijie, TANG Xu | 18 |
| Influence of manufactured sand with different lithology on properties of high-strength concrete | WANG Shuaibing, FAN Zerun, CHEN Yingzhou, NING Yongwei, ZENG Fanwei | 22 |
| Application of fast-hardening and early-strength non-shrinkage concrete in exterior wall panel | NIU Xuanmin | 25 |
| Study on mechanical properties of microporous concrete prefabricated laminated base plate | GAN Jizhong, ZHENG Wang, WANG Hongzhen, YANG Yongheng, ZHANG Xin | 29 |
| Research on effect of plasticity-retaining agent on properties of wet-mixed mortar with different stone powders | YANG Lin, LI Conghao | 33 |
| A review for characteristics of ferrochrome slag aggregate and its application as a green material in concrete | MENG Qingfei, FAN Xiaoxiong, GU Liqiang, ZHANG Zhaobin, GU Zhichao | 37 |
| The leaching toxicity of electroplating sludge sintered body and physical property of mineral admixture | LI Changcheng, CUI Xin, LU Fanjie, FAN Zepeng, LIU Qiming | 41 |
| Study on influence of aerogel on properties of EPS thermal insulation materials | MA Yan, XU Changwei, ZHANG Zhonglun, WANG Mingming | 46 |
| Study on thermal properties of capric-palmitic acid / expanded perlite phase change gypsum | LI Xuan, LIU Zhicheng, ZHANG Yichao | 51 |
| Wind pressure resistance deflection check of EMU polycarbonate plate front window | WANG Guoqing, GU Chunlei, ZENG Yu, PANG Shihong | 55 |
| Study on freeze-thaw resistance of modified epoxy resin grouting material for concrete cracks repairing | LAN Fucai1, YE Jiaofeng | 58 |
| Preparation and properties of reactive crack sealant | LIU Hanchao, LIN Hui | 64 |
| Analysis of stress and deformation of soft rock tunnel with high ground stress in pilot heading expansion | YANG Zeping | 68 |
| Effect of corrosion on hysteretic properties of low carbon steel | WANG Minghui, YANG Jiali, ZHANG Jinchang, LI Zheng, QIN Guangchong | 76 |
| Numerical analysis of deformation characteristics of adjacent masonry structures caused by foundation excavation | ZHANG Jun, OUYANG Junsheng, ZHANG Huanlin | 81 |

Contents

目录

| | |
|---|---|
| Study on test method of hollow metal powder for additive manufacturing | JIANG Wei 86 |
| Study on adaptability of cement and polycarboxylate superplasticizer in western Yunnan | PENG Fei, ZHANG Yuanbao, DENG Lei 89 |
| Risk identification of a self-built house | ZHOU Jian, CUI Weijie, HU Junjie, GUO Zhenzhen, XU Qiubei 92 |
| Research on waterproof layer technology in road and bridge construction | GONG Chunping, ZANG Fan, YUAN Zhixin, MENG Xiaohui, LIU Xinxin, SHAO Boyu 95 |
| Optimization and innovation of auxiliary system for disposal of medium-low level radioactive solid waste in a nuclear power plant | WU Bin 98 |
| Innovative application of ECC mortar in commercial flooring | WANG Wei 102 |
| An overview on the decarbonization paths of building materials production in China | CHEN Jinwen, WANG Li, HU Guofang, WEI Jianxun, GUAN Chen, ZHANG Yi, ZHOU Xu 104 |
| Discussion on resources comprehensive utilization in cement industry | DUAN Yuanyuan 108 |
| Analysis and research on status of polyurethane industry at home and abroad | QIN Ying, ZHANG Yuanjing, LIU Xinzhuang 110 |
| Probe into construction technology of subgrade and pavement in settlement section of municipal road and bridge engineering | WU Wei 113 |

全维板

形相似 质不同



欧盟质量认证



SGS国际认证



Intertek检测报告



ASTM标准



BS标准



FHWA



ISO9001/ISO14001体系认证



国际互认标识