

中文核心期刊 中国科技核心期刊  
RCCSE 中国核心学术期刊  
河南省自然科学二十佳期刊

ISSN1001-1935  
CN41-1136/TF  
CODEN NACAEN

# 耐火材料

## REFRACTORIES

双月刊

美国《化学文摘(CA)》和《剑桥科学文摘》、荷兰Elsevier《斯高帕斯数据库(SCOPUS)》、俄罗斯《文摘杂志》等收录期刊

**精英力量 卓越品质**

[www.lirr.com.cn](http://www.lirr.com.cn) [www.lirrc.com](http://www.lirrc.com)



**中钢集团洛阳耐火材料研究院有限公司**

**SINO STEEL LUOYANG INSTITUTE OF REFRACTORIES RESEARCH CO., LTD.**

中钢集团洛阳耐火材料研究院有限公司 主管、主办

万方数据

**2013 · 4**

第47卷(总第314期)

## 目 次

### 试验研究

- 241 加入ZnO对含Al低碳MgO-C耐火材料抗氧化性的影响 ..... 谢朝晖, 陈留刚, 翟鹏涛, 张 阳
- 245 不同碳源对Al<sub>2</sub>O<sub>3</sub>-Si-C材料基质中原位合成SiC晶体形貌的影响 ..... 梁 峰, 李 楠, 刘百宽, 贺中央
- 250 具有优良抗热震性的可服务于低碳经济的耐火材料  
.....Christos G Aneziris, V Roungos, Steffen Dudczig, M Emmel
- 254 Al<sub>2</sub>O<sub>3</sub>-SiC复相粉对Al<sub>2</sub>O<sub>3</sub>-SiC-C材料性能的影响 ..... 王长春, 叶方保, 陈花朵, 叶晓舟
- 259 复合添加TiO<sub>2</sub>和ZrO<sub>2</sub>对MgO-MA材料性能的影响  
.....陈 娜, 赵惠忠, 周 芬, 张 寒, 崔江涛, 慕松林, 吕永峰, 余 强
- 263 氮化硅铁对Al<sub>2</sub>O<sub>3</sub>-SiC-C系铁沟浇注料性能的影响 ..... 惠先磊, 张海燕, 韦 祎, 张三华, 李梅君, 李志刚

### 开发应用

- 267 数字分析技术在耐火材料岩相分析中的应用 ..... 王杰曾, 谢金莉
- 271 镁砂加入量对刚玉捣打料性能的影响 ..... 胡耀升, 李享成, 朱伯铨
- 274 矾土骨料对Al<sub>2</sub>O<sub>3</sub>-SiC-C铁沟浇注料性能的影响 ..... 魏建修, 樊海兵, 薛海涛, 董 丽
- 278 添加半成品废砖的再生镁碳砖研究 ..... 王 云, 李 林, 彭小艳, 高 飞, 丁贺玮, 杨粉荣
- 281 加入脱硅ZrO<sub>2</sub>微粉对MgO-Cr<sub>2</sub>O<sub>3</sub>材料性能的影响  
..... 杨卫波, 袁 林, 胡建辉, 陈松林, 徐琳琳, 郭学亮, 杨幼然
- 284 硅溶胶结合刚玉-碳化硅质浇注料的性能及其热修补应用 ..... 韩俊华, 夏昌勇, 熊继全, 任 崑
- 287 无碳刚玉-尖晶石不烧钢包砖的研制与应用 ..... 万红伶
- 291 废弃黏土砖的回收再利用 ..... 徐 勇, 邵荣丹

### 综合评述

- 294 不锈钢冶炼用耐火材料的现状及其发展 ..... 梁义兵, 宫 波
- 298 复合型耐火原料的研究进展 ..... 张艳利, 谢朝晖, 李志刚, 贾全利
- 303 酚醛树脂在耐火材料中的应用及其研究现状 ..... 方 伟, 赵 雷, 于晓燕, 李亚伟, 李远兵, 李淑静

### 专题讲座

- 307 相图与耐火材料(IV) ..... 陈肇友

### 讨论·交流

- 311 半钢冶炼条件下复吹炉龄与转炉炉龄同步的研究 ..... 许 可, 童贤强
- 315 连铸中间包包盖设计探讨 ..... 姚焕民, 范俊岭, 史国冬, 马慧慧, 郭振峰
- 318 浅谈如何降低耐火材料企业的期间费用 ..... 张新中

### 综合信息

2013年1—3月耐火材料生产及原材料进出口贸易情况(253); 浇注料用炭黑表面SiC涂层的熔盐法制备及其表征(270); 添加Fe<sub>2</sub>O<sub>3</sub>、Al<sub>2</sub>O<sub>3</sub>和SiO<sub>2</sub>纳米粉对MgO烧结性能的影响(277); “2013耐火材料综合学术会议(第十二届全国不定形耐火材料学术会议和2013耐火原料学术交流会)暨首届铝硅质耐火原料博览会”即将召开(293); 金属Al添加量对高铝浇注料性能的影响(314)

万方数据

## Main Contents

- 241** Effect of ZnO on oxidation resistance of Al-containing low carbon MgO-C refractories  
*Xie Zhaohui, Chen Liugang, Zhai Pengtao, Zhang Yang*
- 245** Effects of different carbon sources on crystal morphology of SiC *in-situ* formed in Al<sub>2</sub>O<sub>3</sub>-Si-C matrix  
*Liang Feng, Li Nan, Liu Baikuan, He Zhongyang*
- 250** Refractories with improved thermal shock performance serving low carbon economy  
*Christos G Aneziris, V Rountos, Steffen Dudczig, M Emmel*
- 254** Effect of Al<sub>2</sub>O<sub>3</sub>-SiC composite powder on properties of Al<sub>2</sub>O<sub>3</sub>-SiC-C bricks  
*Wang Changchun, Ye Fangbao, Chen Huaduo, Ye Xiaozhou*
- 259** Influence of TiO<sub>2</sub> and ZrO<sub>2</sub> complex additive on properties of MgO-MA refractories  
*Chen Na, Zhao Huizhong, Zhou Fen, Zhang Han, Cui Jiangtao, Mu Songlin, Lyu Yongfeng, Yu Qiang*
- 263** Effect of ferro-silicon nitride on performance of Al<sub>2</sub>O<sub>3</sub>-SiC-C trough castables  
*Hui Xianlei, Zhang Haiyan, Wei Yi, Zhang Sanhua, Li Meijun, Li Zhigang*
- 267** Application of digital analysis technology to refractory petrographic analysis *Wang Jiezeng, Xie Jinli*
- 271** Influence of magnesia addition on properties of corundum ramming mix  
*Hu Yaosheng, Li Xiangcheng, Zhu Boquan*
- 274** Effects of bauxite aggregates on properties of Al<sub>2</sub>O<sub>3</sub>-SiC-C iron trough castables  
*Wei Jianxiu, Fan Haibing, Xue Haitao, Dong Li*
- 278** Effect of semi-finished rejected brick addition on properties of reproduced MgO-C brick  
*Wang Yun, Li Lin, Peng Xiaoyan, Gao Fei, Ding Hewei, Yang Fenrong*
- 281** Effect of desiliconized ZrO<sub>2</sub> micropowder on properties of MgO-Cr<sub>2</sub>O<sub>3</sub> refractories  
*Yang Weibo, Yuan Lin, Hu Jianhui, Chen Songlin, Xyu Linlin, Guo Xueliang, Yang Youran*
- 284** Properties and hot repairing application of silica sol bonded corundum-silicon carbide castables  
*Han Junhua, Xia Changyong, Xiong Jiquan, Ren Wei*
- 287** Research and application of unfired carbon-free corundum-spinel bricks for ladle *Wan Hongling*
- 294** State of the art and development of refractories for stainless steel refining *Liang Yibing, Gong Bo*
- 298** Research progress of composite refractory raw materials *Zhang Yanli, Xie Zhaohui, Li Zhigang, Jia Quanli*
- 303** Applications and research status of phenolic resin in refractories  
*Fang Wei, Zhao Lei, Yu Xiaoyan, Li Yawei, Li Yuanbing, Li Shujing*

Sponsor : Sinosteel Luoyang Institute of Refractories Research Co., Ltd.(LIRR)

Editor and Publisher : The Editorial Board of NAIHUO CAILIAO

Editor-in-chief : Prof. CHAI Junlan

Add : 43 Xiyuan Road, Luoyang, Henan 471039, China

Tel : +86-379-64205958

Fax : +86-379-64205968

E-mail : C.JL@NHCL.COM.CN

Web Site : <http://www.nhcl.com.cn>, [www.china-refractories.cn](http://www.china-refractories.cn)

Subscription rate : USD 150(overseas, including air mail postage)

万方数据

Sponsored by Sinosteel Luoyang Institute of Refractories Research Co., Ltd. (LIRR), established in 1966, Naihuo Cailiao (Refractories) is the only technical journal in Chinese in China's refractories industry that reports current situations of the R & D, production and application of refractories in China together with the development status and trend of refractories science and technology abroad. Naihuo Cailiao is published bimonthly and distributed both at home and abroad with the annual distribution circulation of 30 thousand copies.

Naihuo Cailiao also affords space for advertisement which is beneficial to the manufacturers and users home and abroad to establish connection between them, to promote production and sales and especially help foreign companies share China's market.