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### 石煤灰渣酸浸提钒后残渣作水泥混合材试验研究

### Use of residue from acid leaching with stone coal ash as cement admixture

关键词: [提钒残渣](#) [水泥混合材](#) [抗压强度](#) [抗折强度](#)

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作者 单位

施正伦 浙江大学能源清洁利用国家重点实验室, 杭州 310027

周宛谕 浙江大学能源清洁利用国家重点实验室, 杭州 310027

方梦祥 浙江大学能源清洁利用国家重点实验室, 杭州 310027

裘国华 浙江大学能源清洁利用国家重点实验室, 杭州 310027

余德麒 浙江大学能源清洁利用国家重点实验室, 杭州 310027

骆仲洪 浙江大学能源清洁利用国家重点实验室, 杭州 310027

摘要: 为探索提钒残渣用作水泥混合材的可行性,根据提钒残渣的物化特性分析,设计出合理的配料方案.通过对试样的物理检验,研究了提钒残渣的掺量对水泥性能的影响.试验结果表明,提钒残渣属于活性混合材,在掺量为25%~40%时,可单独用作水泥混合材,且不论单掺还是和水泥厂石煤渣对掺,水泥各项性能指标均符合GB175—2007《通用硅酸盐水泥》中复合硅酸盐水泥要求,其强度均满足32.5强度等级水泥要求.提钒残渣掺量的变化对抗压强度的影响远大于抗折强度,且对后期强度的影响要大于早期强度.随着提钒残渣掺量的递增,水泥强度整体上呈现递减趋势.

**Abstract:** In order to explore the feasibility of using the residue from acid leaching with stone coal ash for vanadium extraction as an active cement admixture, experiments were performed to investigate the impact of the amount of residue on the cement performance. The reasonable residue proportion was determined by analysis of the physicochemical characteristics of the residue and physical examination of cement samples with different residue proportions. The experimental results showed that the residue could be used as active cement admixture. It could be used alone as the active cement admixture at a mixed proportion of the residue between 25%~40%. While the residue was used alone or mixed with the stone coal ash as cement active admixture, the cement samples could meet the requirements for composite Portland cement in the Standard of Common Portland Cement (GB175—2007) and the 32.5R cement strength grade. The strength of the cement samples decreased with the increase of the residue proportion. The residue proportion had greater effect on the cement compressive strength than the cement flexural strength, and its impact on the late strength was greater than that on the early strength.

**Key words:** [Residue from acid leaching process](#) [active cement admixture](#) [compressive strength](#) [flexural strength](#)

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单位地址: 北京市海淀区双清路18号 邮编: 100085

服务热线: 010-62941073 传真: 010-62941073 Email: hjkxb@rcees.ac.cn

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