

论文

磨矿对氧化煤浮选效果的影响

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摘要:

采用FTIR对两种不同氧化程度的煤样磨矿前后进行红外光谱分析, 研究表明: 磨矿过程使煤粒表面疏水基(芳环和甲基)含量增加, 使亲水基(羟基和羧基)的含量降低; 轻度氧化煤样经过磨矿20~30 min即可通过常规浮选达到有效的分选回收, 重度氧化煤样需经过80 min的磨矿才可达到最佳浮选回收效果, 但随着磨矿时间的继续增加, 浮选回收效果逐渐变差; 浮选回收效果最佳时, 62~11 μm 粒级含量达到最大值。

关键词: 磨矿; 氧化煤; 浮选; FTIR; 粒度

Effect of grinding on the flotation of oxidized coal

Abstract:

FTIR was used to indicate whether the grinding can improve the floatability of the two different oxidized coals. The results of FTIR show that the grinding processes can reduce the contents of hydrophilic groups (carboxyl and hydroxyl) and increase the content of hydrophobic groups (benzene rings and methyl). The coal oxidized mildly can be floated efficiently after 20-30 min grinding. The coal heavily oxidized can also be floated efficiently after 80 min grinding. But the flotation recovery of heavy oxidized coal drops down while the grinding time is more than 80 min. The best flotation recovery of heavy oxidized coal occurs while the yield of size fraction 62-11 μm is the highest.

Keywords: grinding; oxidized coal; flotation; FTIR; particle size

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