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异质细泥在煤泥浮选中的过程特征

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摘要：

选择开滦矿区高灰难选煤泥试样进行浮选速度试验，对其5个精煤产品和高灰细粒级产品进行了粒度分析和密度分析，运用扫描电镜（SEM）观察了精煤产品的矿物形貌。结果表明：细泥污染存在于整个浮选过程中，J1，J2，J3，J4和J5五个子过程的高灰细泥占原煤的比例接近，但占各产品的比例逐渐升高；随着浮选的进行，高灰细泥（灰分>50%）的浮选速度下降，单位时间细泥的作业回收率降低；通过斯托克斯准数分析和扫描电镜观察，细泥主要是通过机械夹带和在粗粒煤表面罩盖进入精煤产品。

关键词： 煤泥；浮选；过程特征；黏土；矿物形貌

Process characteristics of heterogeneous fine mud in the coal flotation

Abstract:

Processing objects is a kind of hard-to-float and high-ash fine coal which collected in Kailuan mining.Flotation rate experiment was designed for investigating the process characteristics of fine coal.Size analysis and density analysis of five cleans and fine-grained of the flotation rate experiment were studied.The mineral morphology of flotation rate experiment cleans was observed by scanning electron microscopy(SEM).The results show that fine mud contamination exists throughout the flotation process.The fine mud content in J1，J2，J3，J4 and J5 is similar，but gradually increases in its product.With the conduct of flotation，the flotation rate of high-ash fine mud(ash content>50%) reduces，and the operation recovery of fine mud per unit time also reduce.Flotation rate and cumulative yield of heterogeneity fine mud increase with its size and density reducing.The way of high-ash fine mud into clean coal products is mechanical entrainment and covering the surface of coarse-grained coal by SEM and Stokes number(St) analysis.

Keywords: process characteristics

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