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RESEARCH NOTES

聚乙烯醇(PVA)和聚乙二醇(PEG)对氧化铝料浆剪切屈服应力-Ph曲线的影响

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摘要 The pH dependence of the extrapolated shear yield stress for Alcoa A16 α-Al2O3 suspensions
at the powder volume fraction of 0.27 with and without addition of both polyvinyl alcohol (PVA) and polyethylene glycol (PEG) each at fixed 0.18% of the powder mass was studied. With the polymer added, the full deflocculation of the suspension shifts from about pH=-4 to around pH=1.5, at which the minimum value of shear yield stress is higher than that at pH=4. The addition of both PVA and PEG was found to prevent the filter cake from cracking.

关键词 polyvinyl alcohol polyethylene glycol shearing yield stress pH value alumina suspension
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Effects of PVA and PEG on pH Dependent Shear Yield Stress of Concentrated Alumina Suspensions

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Abstract The pH dependence of the extrapolated shear yield stress for Alcoa A16 α-Al2O3 suspensions at the powder volume fraction of 0.27 with and without addition of both polyvinyl alcohol (PVA) and polyethylene glycol (PEG) each at fixed 0.18% of the powder mass was studied. With the polymer added, the full deflocculation of the suspension shifts from about pH=-4 to around pH=1.5, at which the minimum value of shear yield stress is higher than that at pH=4. The addition of both PVA and PEG was found to prevent the filter cake from cracking.

Key words polyvinyl alcohol; polyethylene glycol; shearing yield stress; pH value; alumina suspension

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