URN etd-0407109-183714-1145
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Statistics This thesis had been viewed 49 times. Download 23 times.
Department
Year 2004
Semester 1
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title Suspension and rheology property of the alumina with boehmite slurry and application
Date of Defense 0000-00-00
Page Count 75

Keyword
alumina
boehmite
suspension
hard coating

Abstract
In general, alumina settles down easily in aqueous solution, due to the gravity force from the earth. In this study, boehmite was added to improve the suspension of the mixing slurry. Zeta potential measurement of alumina & boehmite slurry reveals that boehmite could adsorb on the surface of alumina at pH<4. The alumina & boehmite slurry which is pre-adjusted pH value to 1 has the highest suspension height and without sedimentary cake. This kind slurry have a thixotropic behavior at pH=1 and pH=1 4. However if the pH value of the mixing slurry is pre adjusted to 2, the behavior of the slurry is a Newtonian fluid. In addition, the behavior of the mixing slurry change to shear thinning fluid property but not thixotropic behavior if the pH value of this slurry is change to pH=9. The thixotropic behavior of the mixing slurry pre adjueted pH=2 9 is smaller than that of preadjueted at pH=1.
The suspension slurry is applied to the transparent paint in the flexible plastic substrate (PETsubstrate) for hard coating. The hardness of the substrate is improved from HB to 2H after coating this composite film. .
Advisory Committee Tsai Ming-Shyong - advisor

Files etd-0407109-183714-1145-002.pdf

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Date of Submission 0000-00-00