

AimSizer/LNO.0007

Preparation and Characterization of Calcined Kaolin-TiO₂ Composites

Abstract: The calcined kaolin-TiO₂ composite (CKTC) was prepared through mechano-chemical method with TiO₂ and calcined kaolin as raw materials. The preparing process was optimized according to the hiding power and oil adsorption, and its pigment properties were characterized as well. The results showed that the co-grinding time of calcined kaolin and TiO₂, mass ratio of grinding media to powder and stirrer rotating speed has significant influences on pigment properties of CKTC. The hiding power of CKTC was 88.4% of titanium dioxide, the oil adsorption approximated to TiO₂, and the whiteness was also appropriate. The effect when CKTC used in indoor paint was well and it could displace titanium oxide with a certain proportion.

Key words: calcined kaolin; titanium dioxide; composites; pigment property; laser particle size analyzer; particle size analyzer; aimsizer; as-2011 micron laser particle size analyzer; as-2012 submicron laser particle size analyzer

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