分散剂（NH_4PAA）和pH值对3Y-TZP水系浆料分散效果的影响

吴 鹏，王富成，张 勇，杨德林，孙洪魏

(郑州大学物理工程学院材料物理教育部重点实验室，郑州 450052)

摘要 研究了分散剂（NH_4PAA）和pH值对3Y-TZP水系浆料分散稳定性的影响。综合考虑Zeta电位和分散剂的解离对浆料分散稳定性的影响，pH值在8～11为浆料的稳定范围，通过对浆料流变曲线的测定，研究了不同固含量的浆料与其相应的最佳分散剂含量的关系。试验结果表明，NH4PAA对3Y-TZP有明显的分散效果，pH=9时分散效果最好；分散剂最优加入量与固含量的关系曲线呈先升高后下降的趋势，在固含量为65%(质量分数)时分散剂的最优加入量达到最大值。

关键词 3Y-TZP 悬浮液 分散剂 流变曲线

Influence of pH Values and Dispersant (NH_4PAA) Fractions on Dispersive Property of 3Y-TZP Aqueous Slurries

WU Peng, WANG Fucheng, ZHANG Yong, YANG Delin, SUN Hongwei
(Key Laboratory of Materials Physics of Ministry of Education, School of Physical Engineering, Zhengzhou University, Zhengzhou 450052)

Abstract The influence of dispersant NH_4PAA and pH values on the dispersion stability of 3Y-TZP water slurry is investigated. With considering the effect of dispersion stability of slurry on Zeta potential and dissociation of dispersant, the optimum pH range for the stable slurry is between 8 to 11.The relationship of different solid content slurry and the amount of best dispersant was obtained. NH4PAA has an manifest effects on 3Y-TZP, and when the PH comes to 9, the dispersion effects are best. The curve between optimal amounts of dispersion and solid content is inversed. When the solid content is 65wt%, the amount of the best dispersant comes to maximum.

Key words 3Y-TZP, suspension, dispersant, rheological curve

责任编辑： 王 炎
2009年5月第2期