

Impact of the Xanthan Gum on Rheological Properties of Ceramic Slip

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Abstract : The slips intended for the manufacture of ceramics must have rheological properties well-defined in order to bring together the qualities required for the casting step (good fluidity for feeding the molds easily settles while generating a regular settling of the dough and for the dehydration phase of the dough in the mold a setting time relatively short is required to have a sufficient refinement which allows demolding both easy and fast). Many additives have added in slip of ceramic in order to improve their rheological properties. In this study, we investigated the impact of xanthan gum on rheological properties of ceramic slip. The modified Cross model is used to fit the stationary flow curves of ceramic slip at different concentration of xanthan added. The thixotropic behavior studied of mixture ceramic slip-xanthan gum at constant temperature is analyzed by using a structural kinetic model (SKM) in order to account for time dependent effect.

Keywords : ceramic slip, xanthan gum, modified cross model, thixotropy, viscosity

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