

Some aspects on thermal activation of kaolin-clay and its pozzolanic activities

m. hassan

Egypt (hassan_mervat@yahoo.com), Central Metallurgical R& D Institute, Cairo, Egypt

This study aimed to synthesis pozzolan from high grade kaolinitic clay from El Tieh Plateau, Sinai, Egypt. The kaolinitic clay dehydrated at 500-700°C for times ranged between 30-200 minutes. Also, the effect of impurities (quartz and mica) on the dehydration of kaolinitic clay was studied. Complete dehydroxlation of kaolinitic clay was achieved at temperature 700°C and heating time 90 minutes. Transformation of kaolinite to metakaolinite confirmed by XRD and FTIR techniques. Phase development pattern of MK mixed with Ca(OH)₂ using ultrasonic technique with curing temperature 60°C and reaction time ranged between 0-3 days was evaluated using DSC / TG thermograms. The results will be presented later.