

ABSTRACT

Clay soil has vast application especially in the manufacture of ceramics and refractory bricks. Samples of clayed materials from Okwata (AT1) and Aterait (AT2) villages in Teso South Constituency in Kenya were characterized for valorization. Several trial tests were done on the test specimens at varied temperatures. Considering the particle size analysis, the study revealed that clayed materials have non-congested particle size and their plasticity index lies between 17 and 48. Based on the mineralogical study, the samples showed the presence of feldspars, hematite, Kaolin, illite, and Quartz. The sandy nature of these clays is explained by high levels of silica content. The density and linear shrinkage increases with temperature while compressive strength decreases with temperature. Considering the analyses done on ceramic materials after firing, the study recommends that clay content are fit for the manufacture of refractory bricks.