

Application of clay - based geopolymer in brick production: A review

Abstract

This paper reviews and summarizes the current knowledge and application of clay as a geopolymer material in production of geopolymer brick. As we understand, the nature of source materials give a significant impact to the strength of geopolymer. For example, geopolymer made from calcined source material such as calcined kaolin, fly ash, ground granulated blastfurnace slag (GGBS) and others produce a higher compressive strength compared to geopolymer made from non-calcined source material such as kaolin. This paper is reviewing on the suitability of clay application as a geopolymer material in geopolymer brick production. The chemical composition of clay-based material show high content of SiO₂ and Al₂O₃ compound which is similar to the fly ash. Clay-based Geopolymer showed a good potential in a brick production.

Keywords

Bricks; Clay; Geopolymers; Kaolin