

Physical and Chemical Properties of Cement with Nano Black Rice Husk Ash

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Abstract. The existing of pores and micro-crack in the hardened cement paste influences the strength itself. Nano silica produced from BRHA has been used in this study. Nano BRHA replacement levels of 0%, 10%, 20% and 30% by weight of cement were applied. The TGA/DTA and XRD has been conducted for hardened cement paste powder to analyses the effect of different partial replacement of Nano BRHA. It was found that the weight loss results for Ca(OH)₂ seems decreasing with increasing in Nano BRHA replacement. The higher CSH percentage contained in cement paste was 10% of Nano BRHA replacement.

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