Peanut Shell Ash as a Partial Cement Replacement

in Making Concrete Hollow Block

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ABSTRACT

An experimental research was conducted to improve the use of agricultural waste for the booming construction as a pozzolana. The study investigated the physical and chemical property of the Peanut Shell Ash (PSA) and the use of PSA as a partial cement replacement in making a mix design for concrete hollow blocks. Chemical test were performed to verify the chemical composition of PSA and has been compared to cement. It resulted positively that it contains Alumna and Silica which are ingredients for a good mixture.

The results revealed the PSA can be utilized as a cement replacement up to 30%, based on the prescribed compressive strength of the Philippine National Standard for concrete hollow blocks and that the 20% PSA replacement possessed a higher compressive strength than the 0% PSA, Moreover, it is the ideal PSA-Cement ratio that the researcher recommend to the concrete hollow block producer for passing the compressive strength requirement of Philippine National Standard.