

Investigation the Effect of Partial Replacement of Fine Aggregates with Ceramic

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Abstract : This study may help to establish the appropriateness of ceramic waste aggregate for concrete production since it is obviously understood that the rising from continuous urbanization and industrialization development leads depletion of natural construction resource and the disposal of waste material. It can be used as base to conduct a study on the alternative readily available materials like ceramic industrial waste aggregates can lead to environmental concrete. The study assessed the fresh and hardened properties of the concrete produced by replacing part of the natural fine aggregate with an aggregate produced from ceramic industrial waste. In the study, experimental investigation was employed which involved two major tasks: material specifications and experimental evaluation of concrete were done in the laboratory. Experimental investigations such that workability, unit weight, compressive strength test, tensile strength test and flexural strength test for C-25 concrete mixes with different percentages of ceramic industrial waste aggregate after a curing period of 7 and 28 days has done and interpreted the result statically using mean, standard deviation and coefficient of variance.

Keywords : ceramic industrial waste, fresh concrete, hardened concrete, fine aggregate

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