



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_42835
Title of the Manuscript:	COMPARATIVE ANALYSIS ON THE FACTORIAL EFFECT OF CURING AGE ON SOME MAJOR PROPERTIES OF SANCRETE BLOCK PRODUCED IN THE WARM HUMID CLIMATE OF NIGERIA
New title of the Manuscript:	COMPARATIVE ANALYSIS OF MONO-FACTORIAL EFFECTS ON COMPRESSIVE STRENGTH OF SANDCRETE BLOCK PRODUCED AT VARIOUS CURING AGE IN THE WARM HUMID CLIMATE OF NIGERIA
Type of Article:	Original Research Article

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
<p>This paper still needs some improvements in the proper use of the technical English language. For instance, the abstract should read like this:</p> <p style="text-align: center;">ABSTRACT</p> <p>Quality of a composite material like sandcrete block is basically a function of the basic properties of the constituent ingredients, mix ratio relationship, and production characteristics. The effects of change in quantities of the constituent ingredients on the compressive strength of sandcrete blocks produced at various curing ages in Owerri Metropolis are presented in this paper. A field survey was conducted to determine the production characteristics of the blocks marketed in the area. The mix design of the constituent ingredients of the block based on the box-wilson symmetric composite plan B₃ was adopted on the prevalent nominal mix ratio of the block. Results of the strength from each experimental set of the design were used to form polynomial regression models of blocks cured at various ages. Findings show that the average compressive strengths of the 7-day, 14-day, and 28-day old cured blocks are 1.578 N/mm², 1.604N/mm², and 1.975N/mm², respectively. Mono-factorial analysis at the respective age of curing shows that cement and water factors have stronger effects on the strength of the block than the sand factor. The nature of their influences is positive and more linear than quadratic and mutual interaction relationships. The relationship of mutual interaction between the cement and water factors is seen only in the models of the 7-day and 28-day curing ages in this study. Since the strength of the block increases with the age of curing, therefore it confirms the standard practice of 28-day curing age for improved quality of sandcrete block in the industry; as well as recommending mono-factorial analyses on the effects of the independent factors of the mix designed blocks cured age 28-day age, towards the optimum composition of the sandcrete</p>	



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mix ingredients for desired quality of the blocks produced in the study area.

Key words: Sandcrete Block; Mix Design; Box-wilson Symmetric Composite Plan B_3 Model; Factorial Analysis; and Desired Quality.

Reviewer Details:

Name:	<i>J. Dario Aristizabal-Ochoa</i>
Department, University & Country	<i>National University of Colombia at Medellin, Colombia</i>