

Variation of Compressive Strength of Hollow Sand Crate Block (6") with Mix Ratio Using Locally Made Cement (Sokoto Cement)

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Abstract : The Nigerian construction industry is faced with problems of failure of structures/buildings. These failures are attributed to the use of low quality construction materials of which sand crate block is inclusive. The research was conducted to determine the compressive strength of hollow sand crate block (6") using locally made cement (Sokoto cement). Samples were tested for 7, 14, 21 and 28 days for mix ratio of 1:3 to 1:12. From the laboratory results obtained, a mix ratio of 1:10 corresponding to a minimum compressive strength of 1.9N/mm² at 7 days should be adopted. This satisfies the BS 2028, 1364 1986 which specified a minimum compressive strength of 1.8N/mm² at 7 days. At 28 days of curing, the same mix ratio meets the minimum BS standard of 2.5N/mm².

Keywords : buildings, cement, construction, hollow sand crate block, Nigeria

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