

Partial Replacement of Lateritic Soil with Crushed Rock Sand (Stone Dust) in Compressed Earth Brick Production

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Abstract : Affordable housing has long been one of the basic necessities of life to man. The ever rising prices of building materials are one of the major causes of housing shortage in many developing countries. Breaching the gap of housing needs in developing countries like Nigeria is an awaiting task longing for attention. This is due to lack of research in the development of local materials that will suit the troubled economies of these countries. The use of earth material to meet the housing needs is a sustainable option and its material is freely available universally. However, people are doubtful of using the earth material due to its modest outlook and uncertain durability. This research aims at enhancing the durability of Compressed Earth Bricks (CEBs) using stone dust as a stabilizer. The result indicates that partial replacement of lateritic soil with stone dust at 30% improves its compressive strength along with abrasive resistance.

Keywords : earth construction, durability, stone dust, sustainable

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