

Investigation of Suitability of Dredged Wastes for Production of Bricks

Authors : B. Adebayo, A. O. Omotehinse, C. Arum

Abstract : This study investigates the suitability of dredged samples for the production of bricks. Some geotechnical properties (moisture content, grain size distribution) of dredged samples were also determined using the British Standard. Bricks were produced using appropriate mixes of two dredged wastes. The dredged samples (Oroto dredged samples and Igbokoda dredged samples) have high moisture content of 90.48 % and 37.5 % respectively and both are classified as silty materials. The two dredged samples were mixed in different percentage (1- Oroto dredged sample (DS) 85 % and Igbokoda dredged sample (IS) 15 %, 2-DS 70 % and IS 30 %, 3- DS 55 % and IS 45 %, 4- DS 50 % and IS 50 %, 5- DS 45 % and IS 55 %, 6- DS 30 % and IS 70 %, 7- DS 15 % and IS 85 %, 8- Clay 100 %, 9- DS 100 %, 10-IS 100 %) for the production of bricks and were tested for 7 days, 14 days, 21 days and 28 days. Although, the water absorption level of the bricks produced were high (5.635 to 33.4 %), the compressive strength on the 28th day was within the accepted British Standard. The Igbokoda dredge sample is a good material for the production of bricks when mixed with Oroto Dredged sample because the compressive strength of the material is within the accepted limit.

Keywords : bricks, dredged, moisture content, suitability

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