Partial Replacement of River Sand With Volcanic Pyroclastic As Fine Aggregates In Concrete Production

George Okwadha & **Ngengi K.J.**

Department of Civil & Construction Engineering, Technical University of Kenya

Abstract:

The most commonly used fine aggregate in concrete production is river sand. Its extensive mining has led to massive environmental degradation. Volcanic activity in most parts of the world has deposited enormous amounts of pyroclastics especially volcanic tuff and lapilli which can be used to reduce overdependence on river sand. The effects of sand-pyroclastics mixture on workability of fresh concrete, absorption and compressive strength of cured concrete were investigated. Factorial experiments were done with 0%, 25%, 50%, 75%, and 100% sand replacement by weight of sand.....

Keywords: Absorption; Lightweight Concrete; Compressive Strength; Environmental degradation; Volcanic Pyroclastics; Pozzolanic

OSR Journal of Mechanical and Civil Engineering (IOSR-JMCE) Vol. 13 pp, 41-45. (2016).
See more at: *http://www.iosrjournals.org/iosr-jmce/papers/vol13-issue5/Version-3/G1305034145.pdf*