SUITABILITY OF BRICK BATS AS COARSE AGGREGATES IN CONCRETE

ABSTRACT

The research was conducted to study the possibility of utilizing the waste over burnt bricks abundantly available in most parts of Gwer-West Local Government Area of Benue State, particularly Naka, the Local Government capital, as coarse aggregates in structural concrete. Trial mixes were prepared using the crushed over burnt bricks known also as brick bats as coarse aggregates only, mixture of crushed over burnt bricks and river wash gravel as well as using river washed gravel from River Benue. Cubes of concrete were prepared and tested to study the compressive strength. The result indicate that the concrete having brick bats as aggregates may be termed as medium light weight concrete having a density between 2000-2200 kg/m3. To produce the same workability, the brick aggregates concrete requires greater proportion of water than the normal gravel aggregate concrete. Use of broken over burnt bricks as coarse aggregate for structural concrete is recommended when natural aggregate is not easily available, high strength of concrete is not required and the bearing capacity of the soil is low.

 **Keywords**: compressive strength, concrete, crushed burnt bricks, coarse aggregates