INVESTIGATION OF PROPERTIES OF LIGHT-WEIGHT AGGREGATE CONCRETE FOR STRUCTURAL APPLICATIONS

Author(s): Liaqat Ali Qureshi¹, Muhammad Shahid Mehmood², Raja Muhammad Tasaddiq³, Hajrah Nosheen⁴

Abstract:
The properties of concrete produced by using light-weight aggregates are presented in this paper. These aggregates were in the form of slates were collected from three sources in Pakistan: Manki, Attock and Zayarat Kaka Sahib. Aggregates were bloated, crushed and screened to different sizes. Different tests were carried out to determine physical and chemical properties of aggregates. Light-weight aggregate concrete specimens were cast using light-weight aggregates. Normal-weight aggregate concrete (produced with normal-weight coarse aggregates) was used as control mix. Different standard tests were performed on both types of concrete specimens. It was found that light-weight aggregate concrete cast by using aggregates obtained from Manki source provided best results for its application as structural concrete.

For full paper, contact:
Prof Muhammad Masood Rafi
Editor-in-Chief, NED University Journal of Research
Ph: +92 (21) 99261261-8 Ext: 2413; Fax: +92 (21) 99261255
Email: NED-Journal@neduet.edu.pk
Website: http://www.neduet.edu.pk/NED-Journal

¹ Professor, Department of Civil Engineering, University of Engineering and Technology, Taxila, Pakistan, Ph. +92(0)300-5146614, Fax: +92(0)51-9047650, Email: liaqat.qureshi@uettaxila.edu.pk.
² Research Scholar, Department of Civil Engineering, University of Engineering and Technology, Taxila, Pakistan, Ph. +92(0)331-4342233, Fax: +92(0)51-9047797, Email: msmce171@yahoo.com.
³ Research Scholar, Department of Civil Engineering, University of Engineering and Technology, Taxila, Pakistan, Ph. +92(0)347-4361540, Fax: +92(0)51-9047797, Email: rajatasaddiq2010@yahoo.com
⁴ Research Scholar, Department of Civil Engineering, University of Engineering and Technology, Taxila, Pakistan, Ph. +92 (0)321-5519776, Fax: +92(0)51-9047797, Email: hajrahnosheen@yahoo.com.