

ABSTRACT

This study examined the structural behaviour of Lightweight concrete (LWC) using lightweight aggregates (Lightweight expanded clay aggregates) LECA and normal weight aggregates, aims to investigate on concrete mix M15 by the effect of partially and fully replacement of the coarse aggregate by LECA with various percentage such as 20%, 40%, 60%, 80% and 100% and fly ash percentage such as 2%, 3%, 4%, 5% and 6% used as partial replacement for cement in concrete. Analysis of this concrete was done in fresh state as well in hardened state to evaluate physical and mechanical properties of concrete. This project concentrated on performance parameters such as compressive strength, splitting tensile strength of the light weight concrete using LECA (Lightweight Expanded Clay Aggregate) .