

ABSTRACT

Light weight expanded clay aggregate is light weight material manufactured from rotary kiln. In this project, we replaced the natural coarse aggregate with LECA. In this study, mix design of M30 Grade concrete is done as per IS 10262-2009. PPC 53 Grade Cement is used in this study. In this project we have investigated the Compressive Strength, Flexural strength and Split Tensile strength test of concrete at the age of 7 and 28 days.

LECA is replaced by 30%, 40%, 50%, 60% in the place of coarse aggregate. The results of the tests done on 7 & 28 days were recorded and analysed in this study. The results of each variation were compared and studied. Usage of LECA as a construction material also results in Eco friendly concrete because it is a by-product obtained from rotary kiln. It also results in reduced self weight of concrete there by reducing load to supporting members at the same time decreasing the strength.