ABSTRACT

Concrete is a composite material composed of fine and coarse aggregate bonded together with fluid cement (cement paste) that hardens over time. Portland cement is most important ingredient of concrete and is versatile and relatively high cost material. Large scale production of cement is causing environmental problems on one hand and depletion of natural resources on other hand. This threat to ecology has led to researches to use industrial byproducts as supplementary cementations material in making concrete.

Majorly fly ash, silica fume, GGBS, rice husk ash, high reactive metakaolin is some of the pozzolanic materials which can be used in concrete as partial replacement of cement. Silica fume is a byproduct of smelting process in silicon and silicon industry. In this project we used silica fume in concrete as partial replacement of cement by 10%, 15% and 20%. We present a detailed experimental study on compressive strength at the age of 7, 14 and 28 days.