Experimental study on the replacement of cement by Egg shell powder

ABSTRACT

During the world, concrete is presence broadly used for the structure of greatest of the buildings, bridges etc. Presently, the complete construction industry is in exploration of an appropriate and operative the unused product that would greatly minimalize the use of cement and eventually decrease the creation cost. Such a substitute material are egg shell powder and silica fume. Greatest of egg shell waste is willing in landfills short of any pre-treatment since it is conventionally unusable and eventually makes thoughtful eco glitches. Therefore, proper alternate is required to manage the wastes in eco-friendly way. The goal of this investigation work is to use the egg shell powder, silica fume as a limited additional of cement. Egg shell powder is replaced by 5%, 10% and 15% of weight of cement. An experimental research demonstrates the strength features such as split tensile strength, compressive strength, and flexural strength test of egg shell based concrete were investigated. It is found the strength of the concrete rises with the adding of egg shell powder and silica fume and finally the comparison is made for the egg shell and silica fume added strength of concrete.

**Keywords**: Egg shell, Cement, Compressive strength, Split tensile test, Flexural strength test, Durability.