**Strength and Duriabilty Properties of Concrete with Partial Replacement of Cement with Metakaolin and Marble Dust**

**ABSTRACT**

In this study partial replacement of cement has been done at 0%,3%,5%,9%,12%,13% with MK(Metakaolin) and 0%,10%(constant) with MP (Marble Powder). Compressive as well as tensile strength of concrete made with MK-MP has been compared with conventional concrete of grade M30. Durability of concrete was also analyzed with RCMT(Rapid chloride Migration Test). Result shows that there is a gain of strength with the addition of MK and MP. The optimized strength value of concrete was achieved for both compressive as well as split tensile strength at 9%MK and 10%MP.

RCMT shows that with the increase of addition of Metakaolin and Marble powder, there is a decrease in rate of penetration of chloride ions, hence good durability as compared to standard concrete

**Keywords —**Metakaolin; marble dust; strength; duriabilty; RCMT