

ABSTRACT

Concrete has been a main key for construction due to its constituent materials like cement, fine aggregate, coarse aggregate and water. Fine and coarse aggregates are obtained from quarrying of large rocks. The high consumption of raw material like coarse aggregate will result in shortage of such aggregate in future. This will result in environmental damage because of the associated mining and disposal work. Presently large amount of marble waste is generated in marble stone processing in marble industries, large amount of marble stone chips are wasted which could be very useful to replace coarse aggregate in considerable amount which is beneficial not only in saving coarse aggregate but also recycling of the waste.

Therefore, by this study it is intended to investigate the possibility of using these waste marble chips as aggregate for concrete. In this project Marble chips are replaced by coarse aggregates for M25 grade of concrete with replacement of 30%,50%,70%, is carried out to determine the optimum percentage of replacement at which maximum compressive strength is achieved. There are several reuse and recycling solutions for this industrial by-product, both at an experimental phase and in practical applications.

Key words: Broken Marble Chips, Cube Mould, Compressive Strength, Mix Design