

ABSTRACT

Stone industries of Rajasthan are spread across all its districts, from the backbone of its economy. So there is a huge amount of quarry waste generated from the industry, which is also critical from the environment point of view. Quarry dust is just dumped in the open creating health hazards. This affects the productivity of the soil. It reduces permeability which prevents from ground water recharge. Due to huge demand of natural aggregate it is our need to look for the alternative resources. In this study an investigative experiment is reported on the mechanical properties of mortar modified by quarry dust as replacing material of fine aggregate. An endeavor has been made to evaluate the compatibility of quarry dust as construction materials. Properties of mortar are investigated with the replacement of 30%, 50%, 70%, and 100% of fine aggregate.

In this report, investigation will be carried out to use such in mortar, hence different tests were carried out as Compressive strength, Workability – Flow table test, Capillarity Test, Evaluation of durability properties, Water absorption and drying shrinkage on mortar mix. Results are compared to control mix and experimental mixes (using quarry dust in different replacement ratios).