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EXPERIMENTAL STUDY ON MECHANICAL PROPERTIES OF CONCRETE ELEMENTS USING AGRO WASTE AS REPLACEMENT FOR FINE AGGREGATE

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ABSTRACT: In every civil engineering activities, concrete is the predominant material which is effectively applied for the construction of sub-structure and super structure. The rapid development of urbanization and industrialization has depleted the more natural resources. The disposal of these natural resources which are obtained from agricultural activities creates a boom to the environment. The availability of the river sand also gets decreased in day to day construction life; hence agro waste is used as replacement for river sand. In the present study, the agro wastes such as coconut shell powder (CNS), rice husk ash (RHA), saw dust (SDA) are equally proportioned to the weight of the fine aggregate. The varying proportions (2%, 4%, 6%, and 8%) of agro waste to the weight of fine aggregate are taken for experimental investigation. Agro waste concrete is compared with the conventional concrete for the improvement of strength characteristics and also the performances are determined by non-destructive testing. The optimization of the concrete is obtained based on mechanical properties of concrete. The results obtained give the stability of the agro waste concrete to apply in civil engineering applications.

Keywords: *Agro waste concrete, Strength properties, Non- destructive testing.*