

**STUDY OF THE INFLUENCE OF DEMOLISHED
WASTE AS AGGREGATE AND CORRUGATED
STEEL FIBERS IN SELF COMPACTING
CONCRETE BEAM COLUMN JOINTS**

Research proposal

By

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INTRODUCTION

Construction and demolition waste contribute to the major portion of land fill which is polluting the environment. Disposal of this waste is a current global issue which scientists are taking it as a challenge. Utilization by the process of recycling of these solid wastes in large quantities in construction will help reduce the environmental hazard imposed by the construction and demolition waste. This study presents the behavior of Self compacting concrete (SCC) with the utilization of recycled aggregates as a replacement material. Ordinary Portland cement was partially replaced with fly ash (FA), and coarse aggregate (CA) was partially replaced with demolished building materials. In addition to this steel fibers (SF) were added in proper proportion. Suitable dosage of super plasticizers and viscosity modifying agents were also added for achieving increased workability and to maintain a low w/p ratio. By conducting fresh and hardened tests on the specimens an attempt has been made to study the rheological properties, compressive strength, split tensile strength, flexural strength and shrinkage characteristics of SCC.

OBJECTIVES OF THE STUDY

- Determine the rheological properties of SCC
- Determine the hardened properties of SCC
- To investigate the performance of SCC in beam -column joint
- To study various parameters like
 - a. General behavior and failure mechanism
 - b. Load-displacement
 - c. Displacement ductility
 - d. Stiffness
 - e .Energy dissipation
 - f.curvature ductility
- To determine the suitability of the use of demolished waste in SCC in combination with corrugated steel fibre