



# EXPERIMENTAL STUDY OF REPLACEMENT OF COARSE AGGREGATES WITH ALUMINIUM CAPS

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## ABSTRACT

*Industrial waste is one of the major booming issues to dump in the Environment. The requirement of space for segregating the wastes is very difficult to manage the site. On the view of waste recycling material in this research paper Aluminium caps of beverages bottles are selected as partial replacement for the coarse aggregate in the concrete.*

*The study is initiated with 10% replacement of coarse aggregate. By using Aluminium caps in concrete it is also noted that up to certain limit we can reduce the corrosion effect in the structural members. The size of caps is 2.5cm (approximately) is maintained in the concrete mix of Grade M25 is adopted with w/c ratio of 0.43, where the workability is noticed to be similar to Nominal concrete. These caps are first checked for the moisture content and the quality content. After the inspection is completed they are shredded into smaller pieces. Thus, on other hand the negative environment impact of Aluminium cap and the depletion of natural aggregate, utilize waste Aluminium cap as partial aggregate replacement in concrete has foreseen to become considerably effective solution for the issues. Despite of investing the cost on Landfill for waste material, an alternative step is taken to implement the Aluminium caps in concrete. This helps in Low cost construction building.*

**Key words:** Aluminium caps, Environmental impacts, Recycling materials, Natural Aggregate.

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