

Experimental Investigation on Replacement of Course Aggregate by Shredded Rubber Tyre

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Abstract : This paper presents the results, obtained after replacement of coarse aggregates, in concrete mix, with tyre rubber. Solid waste management has gained a lot of attention to the research community now-a- days. Out of the various solid waste, accumulated waste tyres has become a problem of interest because of its non- biodegradable nature. Researchers have investigated over the years, the use of recycled tyre rubber waste as a replacement for aggregate in concrete. In this study an attempt has been made to identify the various properties required for the design of concrete mix with the scrap tyre rubber as aggregate. “Rubcrete-Mix” which would result from such replacement found to have many engineering applications, one of which is it has good mechanical property. Hence it is considered to be one of the best and economical ways of reusing the waste tyres. The present experimental study has the aim of partial replacement of scrap tyre material for the aggregates in concrete, for various engineering applications. For achieving a proper bond with the surrounding concrete paste, the scrap tyre have been designed with respect to their size and shape. With the water – cement ratio being kept constant fine and coarse aggregate has been replaced with tyre. In preparing the concrete, Ordinary Portland cement has been used.

Keywords : Rubcrete-Mix ,Rubberized Portland cement concrete, Specific gravity, Strength, Rubber tyre.

M. Deepika Sree *et al* /International Journal of ChemTech Research, 2017,10(8): 670-676.
