

## **UTILIZATION OF WASTE RUBBER TIRES AS AN ADDITIONAL INGREDIENT OF CONCRETE MIXTURES**

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### **Abstract**

Solid waste products are hazardous to our environment. One of the solid waste products that possess a potential environmental hazard is the stock piling of waste tires. Stockpiles are dangerous. Hereby, in our experimental study, we discuss about the modern methods adopted for the Solid Waste Management in an efficient way. One of the technical tools is inclusion of waste rubber tire in the manufacture of concrete. Rubber is included in the concrete mixture as an additional material which uses rubber from waste tires as a replacement for the portions of the coarse aggregate in the manufacture of concrete, for two mixers namely M<sub>20</sub> and M<sub>30</sub>. Though the compressive strength of the tire included concrete decreases, the strain corresponding to peak compressive stress has increased which results in improved toughness. This concrete also better absorbs heat and sound. This concrete may be applicable as an insulator for heat or as a roadway barrier to reduce the effect of acoustic emission. It has been observed in the present study that the workability of the concrete and the strain corresponding to peak stress has increased significantly with increase in percentage of rubber tire addition.

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**Keywords:** Waster tire rubber, waster rubber, concrete mixture, concrete strength and stress – strain curve.