**STUDY ON STRENGTH PROPERTIES OF CONCRETE BY USING POLYPROPYLENE FIBERS**

**ABSTRACT**

Polypropylene is a thermoplastic polymer utilized as a part of wide assortment of uses including bundling, materials (e.g., ropes, warm clothing and covers). Polymer cement is a piece of gathering of cements that utilizes polymers to supplement bond as a cover. The sorts incorporate polymer-impregnated solid, polymer cement, and Polymer-Portland-bond concrete. The aim of the study was to achieve maximum strength of concrete by using optimum weight of polypropylene fibers. Fiber reinforced concrete is used in a variety of engineering applications because of its satisfactory and outstanding performance in the industry and construction field. Polypropylene fiber in concrete mix design is used for multiple purposes that includes rigid pavement, self-compacting concrete and other applications. 40 cylinders of polypropylene concrete were casted and tested for 7- and 28-days’ strength for both compressive and split tensile strength. It was concluded that the significant improvement was observed in ultimate compressive strength after 7 and 28 days. The optimum percentage of Polypropylene fiber was obtained to be 1.5 percent of cement by volume. The addition of small amount of polypropylene improved the mechanical properties of concrete.