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Strength Studies on Concrete with Recycled Aggregates and Cement with Metakaolin

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Abstract: *Concrete is one of the most widely used construction material in the world. Recent technology has greatly improved the recycling process for waste concrete. Due to the critical shortage of natural aggregate, the availability of demolished concrete for use a recycled concrete aggregate is increasing. The study presents on the natural aggregates and recycled aggregates and also the effect of mineral admixture (metakaolin) on the strength studies. The use of metakaolin in concrete to achieve high strength and durable of concrete. The experimental work on the recycled aggregate and natural aggregates are replaced of 0%,50,100%, replacement of natural aggregate of recycled aggregates were casting in respectively the concrete mixed designed using M30 grade. In the cement partial replacement of metakaolin in 15% used for all mixtures. In the cement partial replacement of metakaolin in 5%,10%, 15%,20% used for all mixtures. The compressive strength of concrete has been determined after 7&28 days are curing compared with the results of concrete. The result shows the 15% of metakaolin and 50% recycled aggregates is high strength in concrete. The compressive strength and split tensile strength of the concrete.*

Keywords: Fly Ash, GGBS, Sodium Hydroxide and Sodium Silicate

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