

Impact of Sugar on Setting Time and Compression Strength of Concrete

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Abstract: *This project gives special importance or value to the effect of sugar on strength of concrete. This Project work determines the effect of admixtures (sugar) on the compressive strength of concrete block. Based on books and literature the main function of sugar is to increase the initial setting time of concrete. Usually, three different percentage of sugar admixtures are taken as 0.0, 0.06, and 0.08% by weight of cement. The compressive strength of concrete blocks increased by 16.02% at 28 days as compared to ordinary concrete blocks. The use of sugar is to delay setting of cement. But, addition of sugar has inevitable implications not only on setting time but also on compressive strength of cement paste. So, its effect needs to be well-understood for better control over its use. Test samples prepared by using 53 grades OPC cement and sugar in increasing proportion did not show a fixed result. On the other hand, use of slag cement considerably increased the compressive strength, tensile strength and the flexural strength of the concrete. Usually, three different percentage of slag cement was taken as 0%, 30% and 50%.the result showed that there was an increase of 20% increases in the compressive strength and a considerable increase in the tensile strength of the concrete mix.*

Keywords: Slag Cement, Sugar, Compressive Strength, Tensile Strength, Flexural Strength

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