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# Partial Replacement of Fine Aggregate through Household Waste Ash in Concrete

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**Abstract :** Municipal solid waste ash is the byproduct produced from the combustion of household waste. The waste when burns in incinerator possess various cementitious and strength properties. In this project, the fine aggregate is being replaced by these municipal solid waste ash and as a form of admixture to achieve the conservation of resources and to make concrete economical. The physical and chemical composition of municipal solid wastesh is determined. The concrete mix of M25 grade is being designed by partially replacing the fine aggregate with municipal solid wastesh. The fine aggregate is replaced in various proportion of 10%, 20%, 30% and 40% by mass. All the test is carried out on the grade of concrete at 28 days. The effect of municipal solid waste ash on strength properties of concrete such as compressive strength, split tensile strength and workability characteristics is to be investigate. As landfill space for the disposal of ash from Municipal Solid Waste Incineration (MSWI) becomes scarce, it becomes more attractive to reduce the volume of materials being disposed there. A further reduction in land filling, though, can be realized by developing a beneficial use for the ash. One of the possibilities is to use Municipal Solid Waste Incineration (MSWI) ashes in concrete production, as it is done with coal combustion products.

**Keywords :** Municipal Solid Waste Incineration, Compressive strength, Split tensile strength, Workability and land filling.

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