

## Experimental Investigation on Utilization of Waste Materials in Fly Ash Brick

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**Abstract :** Fly ash is one of the major residues generated during combustion of coal in thermal power plants. Fly ash brick technology is the process of converting industrial waste materials into quality building material. Another issue in earth is dumping of the Bagasse ash, rice husk ash and copper slag waste. In a growing country like India a huge amount of fly ash waste materials are polluting the environment. The necessity of recycling the materials play a big role in the development of the safe and non- polluted earth. Fly ash, lime, gypsum and quarry dust are used as a replacement material for fly ash. The fly ash was replaced by the Bagasse ash and rice husk ash in the proportion of 2.5%, 5%, 7.5%, 10%, 12.5%, 15%, 17.5%, 20%, 22.5%, 25%27.5% and 30%. Two types of fly ash bricks were casted. One type is Bagasse ash replaced fly ash and another type is rice husk ash replaced fly ash bricks then copper slag are partially replaced in quarry dust. The prepared bricks are cured for 7 days and 28 days and dried in regular temperature. The mechanical and durability properties of optimum percentages of Bagasse ash and rice husk ash replaced fly ash bricks. The use of Bagasse ash and rice husk ash provides for considerable value - added utilization of Bagasse and rice husk in bricks and significant reductions in the production of greenhouse gases by the cement industry.

**Keywords :** Bagasse Ash, Fly ash, bricks, mechanical & durability properties, Rice husk ash

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