

BENEFICIAL UTILIZATION OF USED FOUNDRY SAND

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ABSTRACT

This research was conducted with a view to evaluate the performance of concrete masonry blocks containing discarded foundry sand as a replacement of fine aggregate. A control mortar mix for block was proportioned to achieve a 28-day compressive strength of 1500 psi (on the basis of gross area). Other mixes were also proportioned to replace 35% of regular concrete sand with used foundry sand by weight on one on one basis. The performance of blocks were evaluated with respect to compressive strength, water absorption and bulk density, as per ASTM standards. Blocks made using different foundry sands showed variation in their properties. Technical feasibility of utilizing discarded foundry sand up to 35% replacement level in manufacturing masonry blocks has been established with this research.