

Partial Replacement of Cement by using Rice Husk Ash and Sugarcane Bagasse Ash

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Abstract: *The concrete is one of the important material in construction industry. For the formation of concrete the cement is basic material. The use of cement as a main binding material in the field of civil engineering construction. But during the manufacturing of cement large amount of formation of CO₂ which causes air pollution. There is many searches for developing alternative of binding material that can be eco-friendly and helps towards waste management. The utilization of waste materials in concrete manufacture provides a satisfactory solution to some of the environmental concerns and problems associated with waste management. Agricultural waste such as rice husk ash, wheat, straw, bagasse ash are used as pozzolanic materials for the development of blended cement. Few studies have been reported on the use of bagasse ash and rice husk ash partial cement replacement material with respect to cement mortar. Usage of sugarcane industry waste such bagasse and its ash needs to be disposed in appropriate way for solid waste management. Rice husk is by product from the rice mill. Rice husk ash and sugarcane ash contain pozzolanic properties. Therefore, the purpose of study was to investigate the strength performance of cement concrete contain sugarcane bagasse ash and rice husk ash as partial replacement of cement. In this project work we have replaced the cement with different percentage i.e.,0% ,10%,15%,20% of both sugarcane bagasse ash and rice husk ash .Compressive strength were examine by casting 24 standard cubes of 150 mm x150 mmx150 mm size and cured for 7days and 28 days . For compressive strength, it was found that the compressive strength of 20% replacement of both rice husk ash and sugarcane bagasse ash gives more strength of 7 days and 28 days as compare to other.Based on experimental finding it was conclude that, the replacement of both rice husk ash and sugarcane bagasse ash by 10 % ,15% gives more compressive strength with compare to conventional concrete but replacement of 20% rice husk ash and 20% sugarcane bagasse ash gives more strength as compare to other result.*

Keywords: bagasse ash

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