



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.8, pp 307-313, 2017

A Study on Strength Properties of High Performance Concrete with Partial Replacement of Cement with Silica Fume and Fine Aggregate with Pond Ash in Concrete

K. Arumugam*, M.Ramya Devi

Department of Civil Engineering, SNS College of Technology., Coimbatore.,
Tamil Nadu, India.

Abstract : High performance concrete (HPC) is used to fulfill the properties of strength, workability, durability, workability and long life and at the same time pond ash is used to control the solid waste management in the society caused by the coal-fired power plants are major polluters, impacting all spheres of environment — water, air and land. M60 grade of concrete is used and in which silica fume is partially replaced by 15% instead of cement. To control this solid waste management, pond ash is used as the replacement material in 5%, 10% and 15% for fine aggregate with water cement ratio as 0.32. Strength properties are determined by compressive strength and split tensile strength for 28days.

Key Words : High Performance Concrete, Silica Fume, Pond Ash, Compressive strength, Split tensile strength.

K. Arumugam *et al* /International Journal of ChemTech Research, 2017,10(8): 307-313.
