

STUDY OF MARBLE POWER AS PARTIAL REPLACEMENT FOR CEMENT MORTAR USING M-SAND

GLADWIN ALX. A¹, BASKAR. R² & GANAPATY CHETTIAR³

¹Research Scholar, Department of Civil and Structural Engineering,
Annamalai University, Chidambaram, Tamil Nadu, India

²Associate Professor, Department of Civil and Structural Engineering,
Annamalai University, Chidambaram, Tamil Nadu, India

³Retired Professor, Department of Ocean Engineering, Indian Institute of Technology,
Chennai, Tamil Nadu, India

ABSTRACT

Compressive and Tensile strength testes where carried out M- Sand mortar cubes with cement replaced by Marble power (MP) at the leaves of (0, 5,10,15,20 and 25%) after the curing age of 28 days. The chemical analysis of the rice husk ash revealed high amount of silica (18.43%), calcium oxide (67.79%), Magnesium oxide (13.79%) are the important minerals for Strength, Soundness and setting of concrete. And its having very less amount of magnesia (0.67). It is responsible for unsoundness. These results are indicated that MP can be used as partial replacement for cement mortar using m-sand in the range of 15 to 20%

KEYWORDS: Manufactured Sand (M.S), CSH Gel Formation, Cement Mortar, Marble Power (RHA), Fine Aggregate (F.A)