

The entire work is aimed to study the behavior of concrete with locally available Industrial waste materials like Ground Granulated Blastfurnace Slag(GGBS) and ROBO sand(quarry dust) as supplementary materials for cement and fine aggregates respectively. Also the plastic waste i.e. High Density Polyethylene (HDPE), Polyethylene Terephthalate (PET), High Density Poly Propylene (HDPP) and POLYESTER in the form of fibers are added to the concrete for further study. Detailed experimental investigation has been carried out to understand the behavior of concrete with these supplementary materials and fibers, results are compared with the conventional design mix concrete. The results are quite encouraging with these supplementary materials in the concrete. The combination of GGBS as cement replacement and ROBO sand as fine aggregates can be replaced in the concrete by 50% and 25% respectively. Use of plastic waste as fibers (3.5%) in the concrete, the strength properties of concrete (load carrying capacity) is increased. Overall the compressive, split tensile and flexural strengths are increasing with the addition of non-biodegradable waste products as fibers and supplementary material.

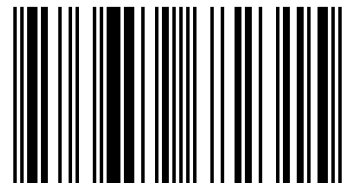
Malagavelli Venu

Concrete with Non-Bio Degradable Waste and Supplementary Materials

Development and Testing



Dr. Venu Malagavelli working as a Associate Professor in the Department of Civil Engineering at Malla Reddy Institute of Technology and Science, Maisammaguda, Dhulapally, Secunderabad, INDIA. He obtained B.Tech from JNTU Hyderabad and M.E., Ph.D from BITS Pilani, INDIA. He is having more than 10 years of experience in both Teaching and Research.



978-3-659-68231-5