

NOVEL APPROACH ON SMART MATERIALS APPLICATION FOR ADVANCED DIAGNOSTIC OF BUILDINGS SKIN MAINTENANCE

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ABSTRACT

Novelty in smart materials technology is the emerging field in 21st century encompassing enormous functionality. In current construction industry there is a hunt for sustainable options put into practice for product establishment. The search has been motivated for the beneficial of ecological system and to create economic stability with the invention. In this investigation the objective is framed in such a way to assess the property of artificial carbon nano tube toughened with cement related composite using compaction shear technique. In the first phase the experimental research preference is given in the field of carbon nano tubes (CNT) for supervising the size, shape and structure of building in various stages with contemporary fashion. Various concrete mix up with replacement ratios of 5%, 10% and 15% of recycled lightweight concrete aggregates (RLCA) and 10%, 20% and 30% of carbon nano tubes (CNT) for every mixing ratios were studied in terms of their compressive strength, tensile strength, modulus of elasticity and abrasion resistance. Electronic components launch conducts charges through environmental factors where these cement surrounding substances are dispersed evenly. Similarly, the environment health hazards, deflection of the building are measured with the support of sensors inbuilt in the structural scheme. This work also elaborates the logical learning and optimization potential of various cement based composites usage in the field of construction industry. Novel material developed as product is worn as energy saver and reused which is a deserving technology of the up coming generations.

Keywords: Carbon nano tube, Cement composite, Smart structural system, Hydration

