
Progress Seminar

Seminar Title	: SUSTAINABLE DEVELOPMENT OF PAVEMENT QUALITY CONCRETE CONTAINING RECYCLED CONCRETE AGGREGATE (RCA) AND OTHER WASTE MATERIALS
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Venue	: CE Department Seminar room
Date and Time	: 21 Nov 2024 (11.45 AM)
Abstract	: The scarcity of natural resources in the construction industry has led to increased costs and shortages. The use of recycled concrete aggregates (RCA) has caught the attention of many researchers who want to promote sustainability in construction. Still, its use in pavement quality concrete (PQC) has been minimal because of its high water absorption characteristics. However, with a proper beneficiation method, the undesirable properties of RCA can be improved. In this study, a new treatment method involving an aqueous solution of sodium silicate and cement has been developed. An effort has been made to use up to 100% treated RCA (TRCA), replacing natural coarse aggregates (NCA), along with fly ash (FA) and copper slag (CS) for M40 grade PQC mixes. The results showed that FA replacement in PQC upto 20% contributes to higher compressive and flexural strength. Further, the PQC mix with CS replacing RS by 60% results in optimum physical and mechanical properties, although the higher replacement results in satisfactory workability and strength characteristics.