**ABSTRACT**

In India, a massive amount of production and demolition wastes is produced every year. These waste materials want a big region to dump and hence the disposal of wastes has emerged as a trouble and the continuous use of natural resources for making traditional concrete results in the reduction of their availability and results in the increase of the cost of the coarse aggregate and fine aggregate. The viable use of recycling demolition waste as coarse aggregate in the construction industry is for this reason increasing significance. In addition to the environmental benefits in lowering the demand of land for disposing the waste, the recycling of demolition wastes can also help to preserve the natural resources. When recycled coarse aggregate is used in structural concrete, the assessment of physically, mechanical and durable characteristics of recycled coarse aggregates may be very crucial. The physical and mechanical properties of concrete with the recycled coarse aggregate (RCA) are to be evaluated to assess its application as structural concrete. The present work is directed in the direction of the assessment of concrete the use of complete replacement of natural coarse aggregate (NCA) with RCA. The experimental results of mechanical and durability properties are also evaluated and as compared with NCA concrete. Recycled coarse aggregate used within the concrete preparation became obtained from the tested laboratory concrete specimens. Tests had been carried out to obtain the mechanical properties of RCA such as compressive strength and durability of concrete the usage of rapid chloride permeability test (RCPT). The main trouble with RCA concrete is high percentage of water absorption. RCA has high compressive comparable to the natural coarse aggregate concrete. This is especially because of excessive amount of connected mortar at the surface of the recycled coarse aggregate and highly angular nature of RCA results in bad satisfactory of coarse aggregate. In RCPT, the chloride penetrating rate is “Moderate” for all grades of concrete with NCA and “High” for all grades of concrete the use of RCA. Based on the results of the experimental research, the RCA can be encouraged as structural concrete in constrained programs due to its high percent of water absorption belongings of RCA.