

ABSTRACT

In this study the concrete coarse aggregates are varied in terms of percentages, the percentages are 20 %, 40 %, 60 %, 80 % and 100 % by sintered flyash aggregates. Before replacing this sintered flyash aggregates to natural aggregates, the nominal size of the natural and sintered flyash aggregates are fixed by 12.5 mm sieve passing. A mix design of M30 grade of concrete mix design was arrived using IS 10262: 2019. The compressive strength of the concrete mix contains 60 % sintered flyash aggregates attains maximum compressive strength compared to remaining replacements. In addition to that durability properties impact strength and water absorption were carried out accordance with ACI and ASTM standard. The 60 % sintered flyash aggregates shows better impact resistance. The replacement of 80 % sintered flyash aggregates and the M30 concrete mixture shows similar characteristics.