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Assessment of Mechanical Properties of Induction Furnace Slag as Partial Replacement of Fine Aggregate in Concrete

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Abstract : Due to growing environmental awareness in Pakistan, the researchers are increasingly turning to assess and analyze properties of industrial waste and finding solutions on using industrial waste as secondary material. Due to industrialization, enormous by-products are produced and to utilize these by-products is the main challenge faced in Pakistan. Induction furnace slag is one of the industrial by-products from the iron and steel making industries. This paper highlights the true utilization of induction furnace slag as partial replacement of fine aggregate. For the experimental investigation, mixes were prepared with fine aggregate replacement using 0 percent, 5 percent, 10 percent, 15 percent, 20 percent, 25 percent, 30 percent, 35 percent and 40 percent induction furnace slag to evaluate the workability, compaction factor, compressive strength, flexural strength, modulus of elasticity.

Keywords : compressive strength, deflection, induction furnace slag, workability
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