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(57) Abstract :
The stabilization of ferrochrome slag with cement as cementitious sub-base and base course for flexible pavement. Mechanical stabilisation is accomplished by blending ferrochrome slag (FC) and quarry dust (QD) in proportions of 90/10, 80/20, 70/30, 60/40, and 50/50 in order to improve the ferrochrome slag gradation. Its noted Only certain mixtures ratios have achieved the MoRTH's required gradation. IS Heavy compaction tests were conducted by adding 2%,4%,6%,8%, and 10% (% by dry weight of the mixture) cement to 70/30 and 60/40 (i.e., FC70QD30 and FC70QD40) mixtures in order to determine Optimum Moisture Content (OMC) and Maximum Dry Density (MDD). The MDD and OMC of cement-treated FC70QD30 and FC60QD40 hardly change, and the increase in cement content has no effect on compaction characteristics. Cylindrical specimens measuring 100mm in diameter and 200mm in height are compacted at OMC and MDD to determine Unconfined compressive strength (UCS) after 7 and 28 days of moist curing. At all cement contents and curing durations, the UCS of FC60QD40 is between x times that of FC70QD30. Approximately 40% to 60% of 28-day strength is achieved in the first 7 days of moist curing.the minimum cement content is determined, by regression analysis. Observations indicate that cementtreated ferrochrome slag and quarry dust composites can effectively replace the granular subbase and base course of flexible pavement.

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