

Black Cotton Soil Modification by the Application of Waste Material- Steel Plant Slag

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Abstract: *The main objective of this experimental study is to improve the properties of the black cotton soil by adding steel slag problematic soil (Black cotton soil) is too weak and does not have required stability for any kind of construction works. In foundation as well as in pavements, sub grade layer lays below the base course or surface course. To improves the strength of sub grade soil, by improving its engineering properties BC soil, In the present study, stabilization of sub grade soil by using slag is used to develop the strength of sub grade soil. The aim of this study is to examine the swelling property and optimum proportion of the stabilizer, which enhance the strength and stability of soil which is appropriately suitable for pavements. An experimental study has been made to use slag for improving the strength of black cotton. The aim of this study is to improve the engineering properties of expansive soil using steel slag and utilization of industrial waste. The samples were prepared, bymixing the percentage of steel slag and expansive soil as 10%, 20%, 30%, and 40% by the dry weight. Standard proctor test, unconfined compressive strength, liquid limit and plastic limit tests are performed to analysis compressive strength, Maximum dry density (MDD) and optimum moisture content (OMC) of soil mixture.*

Keywords: Black Cotton Soil, Steel slag, Stabilization, etc.

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