ABSTRACT

This project is about improvising the stability of black cotton soil using materials such as bagasse ash and lime. This involves the addition of bagasse ash to soil, as to improve its engineering performance. Sugarcane bagasse ash (SCBA) is thus a residue obtained from the burning of bagasse in the sugar industry. In general, the ash with high silica content contains a high portion of quartz. It is characterized as a solid waste and is usually disposed of as landfill. Soil stabilization occurs when lime is added to a reactive soil to generate long-term strength gain through a pozzolanic reaction.

In this we used three types of test Standard Proctor Compaction Test, Unconfined Compression Test, California Bearing Ratio based on above three test the soil get effectively modified by varying proportions of bagasse ash is tested in various proportions such as 5%,10%,15% and 20%. After getting the optimum value from the proportions added ,then the optimum value of bagasse ash is taken and added with lime in 5%, 10%, 15%.The optimum moisture content shows a increased value at 22% when 15% of bagasse ash and 15 % of Lime. but, California Bearing Ratio are carried out on the soil with and without the addition of bagasse ash and lime. The result showed improvement in the maximum dry density values on addition of bagasse ash and with corresponding gradual increase up to 1%.