

Stabilization of Locally Available Clay Using Blood Clamshell Powder as Stabilizing Agent

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Abstract: Land is one of the key elements in building modern infrastructure. Nowadays, most failures happen because of poor performance. To address this problem, a variety of additives such as Lime, sodium carbonate, sodium sulphate, etc. can be used but these are very expensive when you look at the economic perspective. Therefore, it is best to replace this with another type of soil supplement to make it more economical and eco-friendly. Most of the area, with rapid industrial development, consists of soft clay that costs expensive deep foundations. This paper reports on a local clayey soil-based stabilization study using Blood Clamshell powder (BCP) in various doses. Five different BCP values (0%, 2.5%, 5%, 7.5%, 10%) were added to obtain the best percentage. The analysis was performed with a standard proctor compaction test and a test on unconfined compressive strength. Experimental results have shown that BCP has a significant effect on the engineering properties of the soil and the results were analyzed to reach the maximum percentage of ingredients needed for clay to form a solid foundation.

Keywords: Locally Available Clay, Blood Clamshell Powder, Optimum percentage, compaction, unconfined compression strength test.

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