Effects of Rice Husk Ash – Cement Mixtures on Stabilization of Clayey Soils

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Abstract

Rice husk is an agricultural waste that can be used in soil stabilization for improving the quality of locally available soils. So an effort was made in which experimentation was done with locally available soils by mixing 0-15% of RHA along with 0-10% cement by weight of the dry soil. Using Indian Standard (IS) Code specifications performance was investigated for soil – RHA-cement mixture with respect to compaction characteristics & UCS test. The result obtained, indicates a general decrease in the maximum dry density (MDD) and increase in optimum moisture content (OMC) with increase in RHA and cement content. There was also improvement in the UCS with increase in the RHA content up to 10% and cement up to 10%.
The peak UCS values were recorded at 10% RHA at 0% cement which decreases at 15% RHA. Similarly the trend follows for 6%, 8% & 10% of cement. From the observation of maximum improvement in strength, 10% RHA content is recommended as optimum amount for practical purposes.

References

- Alhassan, Musa & Mohammed, Alhaji, "Effects of Rice Husk Ash on cement stabilized laterite."
- I. S. 4332 Test for determination of moisture content-dry density for stabilized mixtures.

Index Terms

Computer Science Information Sciences

Keywords

Rha Cement Clayey Soil Ucs