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| Thesis Title | Stabilization of Rice Husk Ash with Sand-Cement Admixture |
| Thesis Credits | 12 |
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Abstract

The objective of this research is to study stabilization of rice husk ash with sand and cement. Rice husk ash was mixed with sand at the proportions of 100:0, 90:10, 80:20, 70:30 and 60:40 and with cement at the percentage of 3, 5, 7 and 9 by weight of dry soil and compacted with Modified Proctor method. Then, the specimens were tested to find out Unconfined Compressive Strength and California Bearing Ratio (both Soaked CBR and Unsoaked CBR) after curing for different periods of time. The test result shows that UCS, Soaked CBR and Unsoaked CBR tend to increase with sand and cement. In addition Soaked CBR tends to be greater than Unsoaked CBR. It is found that the optimum rice husk ash-sand proportion of 60:40 with cement in the range of 3 to 9 percent, giving the maximum dry density (MDD) in the range of 1.0 to 1.1 ton/m³ with compressive strength in the range of 12 to 28 ksc. with Soaked CBR in the range of 41 to 84 percent and Unsoaked CBR in the range of 40 to 76 percent after curing for 7 day.

The relationship between UCS and Unsoaked CBR, UCS and Soaked CBR, Soaked CBR and Unsoaked CBR, percent sand and MDD, percent sand and UCS, percent sand and Unsoaked CBR, and, percent sand and Soaked CBR, tend to be

linear relation. The addition sand proportion mixed to the rice husk ash tend to reduce the cement requirement of the mix while its density shows the trend of increase. The strength of rice husk ash stabilized with cement tend to increase with curing time.

Keywords : Rice Husk Ash / Cement Stabilization / Light Weight Materials