Thesis Title	Relationship Between Unconfined Compressive Strength and Unsoaked CBR of Cement Stabilized Silty Sand
Thesis Credits	12
Candidate	Mr. Chaiwat Manuskul
Supervisors	Prof. Dr. Teeracharti Ruenkrairergsa
	Assoc. Prof. Kasem Petchkate
Degree of Study	Master of Engineering
Department	Civil Engineering
Academic Year	1998

Abstract

Silty sand could be easily found in the northeastern region of Thailand. Mostly it is used as selected materials for road pavement with low traffic. However, currently due to the shortage of crushed rock to be used as base course for roads, especially in the northeastern region. Therefore there is a necessity to improve the properties of silty sand so that it could be used as a substitute for crushed rocks. The Study of "Relationship between Unconfined Compressive Strength, and Unsoaked CBR of Cement Stabilized Silty Sand" is part of the long-term project of the improvement of silty sand by mixing with cement in order to use as base course for good quality road. The sample of silty sand for this study is collected from the left side of the highway no. 2228 at km. 39+300 in Khon Kaen Province. According to the study, for the amount of cement of 1 percent, the UCS and Unsoaked CBR of the mixture do not change significantly whereas at 3 percent, 5 percent and 7 percent cement the UCS and Unsoaked CBR increase significantly. Such an increase for the sample mixed with Portland-Cement is higher than that being mixed with Mixed-Cement. The relationship between UCS and Unsoaked CBR with 1 percent cement by weight for various curing times is of small cluster pattern, whereas those of 3 percent, 5 percent, 7 percent show the linear relationship both for Mixed-Cement and Portland-Cement. The line shows the relationship between UCS and Unsoaked CBR of sample mixed with Mixed-Cement is similar to that mixed with Portland-Cement. This tends to show that both types of cement yield a similar effect to UCS and Unsoaked CBR of the cement treated silty sand

Keywords : Cement Stabilized Silty Sand / Base Course / Mixed Cement /Portland Cement