Identification of Location Points for Dispersive Soil and Stabilization with Lime

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ABSTRACT

This study presents the identification of location points and stabilization of dispersive soil with lime. In this research, four soil samples are taken from Mandalay region in Central Myanmar. According to visual identifications in field, four samples are collected from Tada-U Township, Natoghi Township, Amarapura Township and Sintgaing Township in Mandalay region. By using GPS (Global Positioning System), we got the location points of studied soils. And then, the physical properties of studied soils are performed. According to Unified Soil Classification System (USCS), the collected soil samples are lean clay with sand in CL group, fat clay in CH group, and clayey sand in SC group.

In order to determine the dispersive degree of studied soils, physical dispersion tests are performed. Among them, the highest degree of dispersion of sample is selected and chemical test is carried out. In case of stabilization, the selected soil sample is mixed with lime (2%, 4%, 6%) by dry weight of soil.

According to the dispersive degree, 2% lime of treated soil is chosen to study the improvement of strength. At 28 days of curing time, the California Bearing Ratio (CBR) value of 2% lime treated soil in soaked and unsoaked condition is 25.33 and 31.66 respectively. Finally, it is concluded from this study that 2% lime treated soil can be used as base course of a roadway structure.