

Evaluation, Selection and Assessment of Guidelines for Chemical Stabilization of Tropical Residual Soils

ABSTRACT

Soil stabilization has been widely used as an alternative to substitute the lacking of suitable materials on site. Guidelines and standards have been developed to assist practitioners in designing structures such as road by mean of stabilization. This paper presents the results of an investigation aimed at evaluating and assessing the suitable guidelines for the stabilization of tropical residual soils. Two types of tropical residual soils namely granite residual and sedimentary residual soil were tested by using conventional methods practiced in Malaysia and two guidelines, namely the TRL and PWD were evaluated. From the results of this study, it appeared that the TRL gave a simplified and satisfactory route in selection of suitable binder for the stabilization processes of tropical residual soils.

Keyword: Cement stabilization, compaction, granite residual soil, plasticity index, sedimentary residual soil, PWD, TRL, unconfined compressive strength