EFFECTS OF ENZYM UREASE OF CLAYSHALE IN SHEAR STRENGTH

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Abstract

In recent years utilization of biotechnology in the field of geotechnical has started. The research involved the use of Enzym Urease as a stabilization material by bio cementation method. This method is done manually by mixing Enzyme Urease and through additional 10% laterite soil to Clay shale. The test uses the Triaxial CU (Consolidated Undrained) test toward samples that undergone curing for 28 days. The result indicates that the sample is stiffening, proved by Triaxial CU test, with an increase of shear angle and slake durability test. Shear angle of mixture urease +10% laterite has increased. Thus, the curing time of 28-days is practically useful rather than the original soil.

Keywords - stabilization, clay shale, enzym urease, biocementation, Consolidated Undrained (CU), shear angle.