A review on experimental investigations and geotechnical Characteristic of peat soil stabilization

ABSTRACT

Peat soil is an organic soil which consist more of that 70% of organic matters and can be recognize from their color and texture. Peat bogs are an important ecosystem that contributes significantly to global climate stability. Peat from Malaysia is tropical peat. This peat has distinct features that distinguish it from other types of peat. This soil is normally dark reddish-brown to black and made up of partially decomposed leaves, branches, twigs, and tree trunks with a low mineral content in its natural state. Various of experimental and study has been conducted to improve and stabilize of peat soil due to compressibility and geotechnical characteristics of peat. Peat also is an inadequate soil for sustaining foundations in its natural condition due to its high moisture content (>100%), high compressibility (0.9-1.5), and poor shear strength (5-20 kPa). Thus, injection method of Eco-Processed Pozzolan (EPP) will be used to increase the stabilization of peat soil. The study of index properties such as von Post scale, natural moisture content, liquid limit, bulk unit weight, specific gravity, initial void ratio, pH value, linear shrinkage, plastic limit, fiber content, ash content and organic content and composition compressibility of peat soil will be conducted; present of compressibility of peat soil with Eco-Processed Pozzolan (EPP). A comprehensive laboratory work will be carried out to study the compressive parameters of hemic peat stabilized with various quantities of EcoProcessed Pozzolan (EPP) which they were subjected to Rowe Cell Consolidation test between disturbed and undisturbed samples. From this research, the relationship between peat soil and Eco-Processed Pozzolan (EPP) will be determined whether usage of EPP may can increase a stabilization of peat soil and be a 'binder' element in peat soil.