

Correlations of the dynamic parameters on Malaysia hemic peat

ABSTRACT

The dynamic behaviour of Hemic peat in Johor, Malaysia is described. The index properties of three different locations in Johor were investigated. Cyclic triaxial test with different frequencies and effective stresses were applied to correlate the characteristics behaviour of Johor peat. By using the Cyclic Triaxial machine located in the Research Centre of Soft Soil, Universiti Tun Hussein Onn Malaysia, the tests conducted referred to the British Standard and ASTM. The result of cyclic shear modulus shows that hemic peat in Johor indicated less than 2MPa and damping ratio in the range of 7.70% to 24.84%. The influences for the cyclic shear modulus correlations in this research are mostly affected by the effects of fibres structures and the natural characteristics of peat. The different behaviour of fibres in peat also significantly influenced the results. These behaviours lead to a different performance of each sample used. The natural characteristics of peat results in varied and scattered behaviour. Through this assessment, the peat characteristic is significantly depending on the well-structured of hemic peat which mostly consists of fibres, water and pores that controls its behaviour during the cyclic loading test.