

Perilaku tanah residual Depok yang dipadatkan akibat beban siklik satu-arah pada kondisi terkonsolidasi takterdrainase = Behavior of compacted Depok residual soils under one-way cyclic loading on consolidated undrained condition

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Abstrak

Penelitian di laboratorium dilakukan untuk meneliti pengaruh perbedaan kecepatan pembebanan dan perbedaan kadar air terhadap Perilaku Tanah Residual Depok Yang Dipadatkan Akibat Beban Siklik Satu-Arah Pada Kondisi Terkonsolidasi Takterdrainasi dengan menggunakan alat triaxial sistim otomatis dan dengan pengontrolan tegangan dan dalam kondisi takterdrainasi. Pematatan pada contoh uji dilakukan sesuai standar Proctor (T-99) dengan kadar air awal masing-masing 40, 45 & 50 %. Contoh uji sebelum pengujian dijenuhkan terlebih dulu sampai koefisien $B > 0,97$. Pengujian dilakukan dengan kecepatan pembebanan 0,05 dan 0,50 %/menit, dengan tekanan lateral pada contoh uji, 50 kPa. Hasil pengujian menunjukkan bahwa delta regangan terbesar terjadi akibat kecepatan pembebanan yang tinggi sedangkan tekanan air pori terbesar terjadi pada kadar air yang mendekati optimum, 45 % dan terkecil pada kadar air maximum, 50 %.

.....A laboratory research has been conducted to investigate the loading rate and varies water content effect on Behavior of Compacted Depok Residual Soils Under One-Way Cyclic Loading on Consolidated Undrained Condition by using triaxial automated system apparatus under stress controlled and under undrained condition. The samples were compacted using Standard Proctor (T-99) at water content of 40, 45 and 50 % respectively and saturated until its reached coefficient B higher than 0,97. The tests were carried out at loading rate of 0,05 and 0,5 %/min. and performed a confining pressure of 50 kPa. The test results indicate that the largest delta-strain occurred at peak loading rate and the largest excess pore water pressure occurred to the samples which have water content close to optimum of 45 % and the smallest excess pore water pressure occurred to the samples which have maximum water content of 50 %.