SUMMARY

PENGARUH VARIASI TEGANGAN AIR PORI NEGAT1F TERHADAP PERUBAHAN TEGANGAN GESER PADA LEMPUNG KAOLINITE

EFFECT OF VARIATION SUCTION
TROUGH SHEAR STRENGTH CHANGES
OF KAOLINITE CLAY

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Description :

Tanah di darah tropis mengalami siklus drying-wetting akibat adanya musim hujan, musitn kemarau, dan juga akibat adanya usaha manusia. seperti misalnya dewatering dan vacuum preloading. Hal ini menyebabkan muka air tanah selalu berfluktuasi kcmudian tanah mengalami perubahan tegangan air pori negatif. Pada percobaan siklus drying-wetting menunjukkan bahwa naik turunnya air kapiler (atau suction) ini mengakibatkan bervariasinya volume tanah dan tegangan geser. Variasi volume tanah ditunjukkan dengan perubahan angka pori (e), kadar air (w) dan derajat kejenuhan (Sr). Secara umurn hasilnya menunjukkan bahwa saat drying tegangan geser tanah naik, sedang saat wetting tegangan geser tanah mengalami penurunan. Namun, untuk kondisi inisial slurry, tegangan geser pada lintasan drying-wetting, terdapat hysterisis yang cukup berarti atau besar. Sebaliknya, tegangan geser pada kondisi siklik yang dimulai dari lintasan drying tertentu menunjukkan variasi yang kecil atau hystcrisisnya sangat lemah.

Description Alt:

Soil in the tropical area is having drying - wetting Cycle because of the wet and dry season, also because of the human efforts such as dewatering and vacuum preloading. This could make soil water surface always fluctuated, then the soil will having some changings of the suction. The drying - wetting cycle experiment shows that the capiler water fluctuation or suction results the variation of the soil volume and shear strength. Soil volume variation is shown by the changing of void ratio (e), water content (w), degree of saturation (Sr). Normally, the result shows that when drying process occur the soil shear strength will increase, and when wetting process occur the soil shear strength will decrease. However, for initial slurry condition, shear strength at the drying-wetting path, would result large and significant hysterics. In reverse, the shear strength at cyclic condition, that began at particular drying path, will shows small variation or the hysterics shall be very weak.

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