

## PDS 1b: Laboratory testing (II): Strength, large deformation and hydraulic properties

### SPD 1b: Tests de laboratoire (II): Résistance, grandes déformations et propriétés hydrauliques

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Paper Presentation and Poster Discussion Session (PDS) for “1b: Laboratory testing II - Strength, large deformation, and hydraulic properties” was held at 16:00-19:00 on September 13 (Tuesday). The session included forty papers covering the behaviour of widely different materials.

#### Unsaturated soils

A structure-based approach to the estimate of the water retention curve of soils, Cafaro, F., Cotecchia, F.

Soil-water characteristic curve assessment using a reference state concept, Sung, S.-G., Lee, I.-M., Cho, G.-C., Reddi, L.N.

A method to estimate soil-water characteristic curve for weathered granite soil, Lee, S.R., Kim, Y.K., Lee, S.J.

Modelling of the hydromechanical behaviour of unsaturated swelling soils under high suctions, Mrad, M., Cuisinier, O., Abdallah, A., Masrouri, F.

Effects of soil suction on dilatancy of an unsaturated soil, Ng, C.W.W., Zhou, R.Z.B.

Volume change and shear strength behavior of an unsaturated soil with high soil suction, Nishimura, T., Vanapalli, S.K.

Energy concept and soil compression, Zhang, Z., Tao, M., Tu-may, M.M.

Shear characteristics of an unsaturated compacted granite soil, Chae, Y.-S., Kim, C.-K., Lee, K.-I., Kim, T.-H.

On the collapse susceptibility of the loess of Northern France, Cui, Y.J., Delage, P., Marcial, D., Terpereau, J.-M., Marchadier, G.

Suction-swelling relation for Warsaw clays, Skutnik, Z., Garbulewski, K.

Strength of an unsaturated Kaolinite clay under suction pressures, Vesga, L.F., Vallejo, L.E.

Shear strength/moisture content models for a laterite soil in Ilorin, Kwara State, Nigeria, Jimoh, Y.A.

Characterization of swelling materials by Huder-Amberg oedometric test, Romana, M., Seron, J.B.

#### Clay soils; long term effects

Relevance of secondary compression in Venice lagoon silts, Cola, S., Simonini, P.

Undrained creep susceptibility of clays, Lacasse, S., Berre, T.

Geotechnical characteristics determining consolidation in organic soils, Szymański, A., Lechowicz, Z., Drożdż, A., Sas, W.

Thermo-hydro-mechanical behavior of a saturated plastic clay, Taibi, S., Ghembaza, M.S., Fleureau, J.M.

Yielding and stress-strain relationships for Bogotá Clays, Rodriguez, J.A.

Effect of sample size on resilient modulus of cohesive soils, Elias, M., Titi, H.H.

#### Granular soils

Yield behavior of sand under generalized stress conditions, Naughton, P.J., O'Kelly, B.C.

Effects of shear stress history on yielding of dense Toyoura sand in p'-constant shear plane, Kuwano, J., Nakada, T.

Relative density effects on drained and undrained strengths of sand at high pressures, Lade, P.V., Yamamuro, J.A., Bopp, P.A.

Reverse behaviour and critical state of sand with small amount of fines, Bobei, D.C., Lo, S.R.

Some observations on the cyclic loading response of a natural silt, Wijewickreme, D., Sanin, M.

Parameters describing flow liquefaction of soils, Lipiński, M.J., Wolski, W.

Test study on behavior of interface between structure and coarse grained soil, Zhang, G., Zhang, J.-M.

Drainage characteristics and behaviour of hydraulically placed mine fill and fill barricades, Rankine, K.J., Sivakugan, N.

#### Soil mixtures and soil “design”

Influence of particle size distribution on mechanical behavior of a soil, Reiffsteck, Ph., Nguyen Pham, P.T.

Failure characteristics of an heterogeneous soil, Pedro, L.S., Canou, J., Dupla, J.-C., Dormieux, L.

Influence of sand fraction on compressibility and hydraulic conductivity of clayey soils, Watabe, Y., Saitoh, K.

Strength characteristics and construction management of cement-mixed gravel, Watanabe, K., Tateyama, M., Yonezawa, T., Aoki, H.

### *Chemo-mechanical interactions*

Gypsum cementation and yielding in plastic clay, *Graham, J., Man, A., Alfaro, M., Blatz, J.A., Van Gulck, J.*

Geotechnical characterization of saline soils, *Foncea, C., Acevedo, P., Olguín, R.*

Research on strength and deformation properties of Swedish fine-grained sulphide soil, *Westerberg, B., Albing, D., Larsson, R.*

### *Experimental technique*

Effects of necking and its suppression in axisymmetric extension tests on clay, *Yamamuro, J.A., Liu, Y.*

Influence of the end friction on the response of triaxial and plane strain clay samples, *Perić, D., Su, S.*

Difference between the values of friction angle  $\Phi$  derived from the theoretical fracture plane and the reliable one obtained from triaxial tests, *Grammatikopoulos, I.N., Anagnostopoulos, C.A.*

Cross anisotropic stiffness properties of soils via crosshole seismic wave measurements, *Hiltunen, D.R., Choi, Y.*

Automated K0 consolidation in stress path cell, *Piriyakul, K., Haegeman, W.*

The EFA, Erosion Function Apparatus: An overview, *Briaud, J.-L., Chen, H.-C.*