



ANALYSIS OF STRESS PATHS AROUND PRESSUREMETER PROBE FOR A SATURATED CLAY

Summary:

We present in the proposed work a numerical analysis of the soil behaviour around pressuremeter based on the generalised Prager's model with the Von Mises Criterion. In the first part, the soil behaviour law is described. Based on the analytical representation of the stress- strain curves obtained with triaxial tests, proposed by Bahar & Olivari, it is shown how the parameters of the generalised Prager model, constituted of a large number of elastoplastic slip elements associated in series, can be identified. Also, by introducing the assumption of plane strain, it is significance. Furthermore, without adding a new parameter, the response of pressuremeter test with a cycle of unloading-reloading is found to be realistic.

In the second part of the paper, we analyse the unloading-reloading curve, the disturbance effects surrounding pressuremeter probe and finally, we visualise the stresses path in all points of discretisation.

Key words:

Behaviour, Cohesive soils, Prager model, pressuremeter test, unloading-reloading curve

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