Bearing Capacity of Roads, Railways and Airfields – Tutumluer & Al-Qadi (eds)

Precision triaxial equipment for the evaluation of the elastic behavior of soils

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ABSTRACT: Samples of a sandy soil reconstituted by Proctor compaction were investigated under different isotropic and anisotropic stress paths for different initial stress states in the p-q space using a triaxial apparatus developed for this purpose. The equipment uses a triaxial cell with sample instrumentation for accurate measurements of the stress and strain states. The tendencies of the limit of the elastic domain were analyzed. Several initial stress states and stress paths were investigate in order to quantify key tendencies. Results show that the limit of the elastic domain of the studied soil depends on the initial stress state and on the applied stress path.