

عنوان مقاله:

AN INVESTIGATION OF "b VALUE" DETERMINATION AND INTERMEDIATE PRINCIPAL STRESS VARIATION IN POROUS MEDIA

محل انتشار:

ششمین کنفرانس بین المللی مهندسی عمران (سال: 1382)

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خلاصه مقاله:

This paper describes a series of drained monotonic plane strain test results on Leighton Buzzard sand under different initial magnitudes of intermediate principal stress, σ_2 . The variations of stress ratio $\sigma_2/(\sigma_1+\sigma_3)$ were monitored during shearing to clarify the significance of intermediate principal stress. It is shown that the stress-strain response of sand, its shear strength and stress ratio $\sigma_2/(\sigma_1+\sigma_3)$ at failure, do not vary significantly and almost independent of the initial magnitudes of σ_2 , but are dependent on its initial void ratio, implying that if different initial values of σ_2 create various directional anisotropic structures they play no part in the plane strain tests. Also a numerical model, which is capable of including σ_2 , is proposed to predict particularly stress-strain response of sand and magnitude of σ_2 at failure

کلمات کلیدی:

sand, monotonic test, intermediate principal stress, b value, modeling

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