

Study of Effective Friction Angle of Normally Consolidated Soils

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Abstract

The determinations of effective friction angle are ambiguous for many geotechnical practical applications. This research conducts 40 sets of direct shear tests to observe the variations of friction angles for normally consolidated soils using concepts of friction law in physics. Based on the test results, the observed values of effective friction angle have shown a statistical normal distribution within a bounded interval. For a more reliable stability design, the effective friction angle can be determined directly by taking into account the mean value and different values of standard deviation dependent upon the risk evaluation.

Keyword : friction angle, normally consolidated soils, shear strength