

Undrained Shear Strength and Anisotropic Yield Surface of Diatomaceous Mudstone

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Abstract : When constructing a structure on soft rock, adequate research and study are required concerning the shear behavior in the over-consolidation region because soft rock is considered to be in a heavily over-consolidated state. In many of the existing studies concerning the strength of soft rock, triaxial compression tests were conducted using isotropically consolidated samples. In this study, the strength of diatomaceous soft rock anisotropically consolidated under a designated consolidation pressure is examined in undrained triaxial compression tests, and studies are made of the peak and residual strengths of the sample in the over-consolidated state in the initial yield surface and the anisotropic yield surface.

Keywords : diatomaceous mudstone, shear strength, yield surface, triaxial compression test

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