Pengaruh siklus pembasahan dan pengeringan terhadap kuat geser tanah ekspansif yang distabilisasi dengan semen dan pasir melalui uji triaksial terkonsolidasi tak terdrainase = The effect of drying-wetting cycles to shear strength of expansive soil stabilized by cement and sand through consolidated undrained triaxial test

Vandemora, author

Abstrak

Penelitian ini merupakan studi awal mengamati pengaruh siklus basah kering terhadap potensi mengembang dan kuat geser tanah lempung ekspansif Cikarang, Jawa Barat dengan dan tanpa campuran semen dan pasir. Sampel tanah uji dipadatkan pada kadar air optimum standard proctor, kemudian dilakukan uji One Dimension Swelling Method dan uji triaksial CU. Untuk satu siklus, dilakukan proses pembasahan selama 4 hari dan pengeringan 3 hari udara tanpa pengecekan kadar air optimum awal. Efek dari siklus basah kering adalah terjadi penurunan potensi mengembang dan meningkatnya kuat geser baik untuk kondisi tanah asli dan tanah campuran.

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This research was a preliminary study that investigated the effect of drying-wetting cycle on the swelling potential and the shear strength of the expansive clay sample, which had been taken from Cikarang, West Java, with and without adding the mixture of cement and sand. The expansive clay sample was compacted at the standard proctor optimum moisture content and tested by using the one dimension swelling method and triaxial CU test afterwards. One cycle consists of 4 days of wetting process and 3 days of natural drying process, without the initial optimum moisture content being considered. The effect of drying-wetting showed the decreasing potential of the clay to swell and the increasing shear strength of the expansive clay on both the original expansive clay and the expansive clay with the cement and sand mixture.