ABSTRAK

Ade Damayanti Safitri. 2021. *"Pengaruh Tanah Kering Optimum dan Tanah Basah Optimum terhadap Kuat Tekan dan Kuat Geser Tanah Laterit Desa Nggawia Kecamatan Tojo Barat Kabupaten Tojo Una-Una".* Program studi Teknik Sipil S-1, Fakultas Teknik Sipil, Universitas Sintuwu Maroso, Dosen Pembimbing I : Ebelhart O. Pandoyu, ST.,M.Eng . Dosen Pembimbing II : Riwan F. Kelo, ST.,MT.

Penelitian ini bertujuan untuk dapat mengetahui pengaruh tanah dalam keadaan kering maupun basah terhadap kuat tekan bebas, kohesi tanah,serta sudut gesek tanah laterit. Lokasi pengambilan sempel tanah di ambil di desa nggawia kecamatan tojo barat kabupaten tojo una-una. Metode yang digunakan dalam penelitian ini yaitu Analisa Saringan, Hidrometer, Berat Isi, Kadar Air, Berat Jenis, Batas-batas Atterberg, Kuat Tekan Bebas, Kuat Geser Langsung. Dari hasil penelitian didapatkan , jika ditinjau dari kuat tekan tanah yang mengikat bisa ditarik konklusinya yaitu taraf daya dukung tanah menjadi lebih baik bila menggunakan batas penambahan air di persentase 2%. Dan bila dicermati dari nilai kohesi serta sudut geser tanah, dapat kita simpulkan bahwa meningkatnya nilai sudut geser tanah maka taraf daya dukung tanah semakin baik. Serta semakin rendah nilai kohesi tanah maka meningkat nilai sudut gesr yang dihasilakan. Dari penelitian sampel tanah yang diambil dari Desa Nggawia, Kec. Tojo Bara,t Kab. Tojo Una-Una. Kita dapatkan persentase lolos saringan no.200 sebanyak 2,34%, dimana hasil ini masuk dalaam kategori tanah berbutir (lolos saringan no.200 ≤ 35%) dan indeks plastisitasnya (IP) sebesar 3,622% sebagai akibatnya dpat diterik kesimpulan jenis tanah yang di dapat sesuai tabel AASTHO merupakan tanah lanau dengan Plastisitasnya Rendah.

Kata Kunci *: Tanah Laterit, Air, Kuat tekan dan Geser*

ABSTRACT

Ade Damayanti Safitri. 2021. "**The Effect of Optimum Dry Soil and Optimum Wet Soil on Compressive Strength and Shear Strength of Laterite Soil Nggawia Village, Tojo Barat Sub District, Tojo Una-Una Regency**". Supervised by Ebelhart O. Pandoyu and Riwan F. Kelo.

This study aims to find out the effect of dry and wet soil on the free compressive strength, soil cohesion, and the angle of friction of the laterite soil. The location for taking the soil sample was taken in the village of Ngawia, West Tojo sub-district, Tojo Una-Una district. The method used in this research is Sieve Analysis, Hydrometer, Fill Weight, Moisture Content, Specific Gravity, Atterberg Limits, Free Compressive Strength, Direct Shear Strength. From the results of the study, it was found that, based on the compressive strength of the binding soil, the conclusion can be drawn that the level of soil carrying capacity becomes better when using the limit of adding water at a percentage of 2%. Based on the cohesion value and the shear angle of the soil, we can conclude that the increase in the value of the soil shear angle means the better the level of soil bearing capacity, the lower value of soil cohesion and the higher value of the resulting shear angle. From the research, soil samples were taken from Nggawia Village, Tojo Barat Sub District, Tojo Una-Una District get the percentage that passes the filter no. 200 as much as 2.34%, it is included in the category of granular soil (passed sieve no. 200 35%) and the plasticity index (IP) is 3,622%. It can be concluded that the type of soil used according to the AASTHO table is a silty soil with low plasticity.

Keywords: Laterite Soil, Water, Compressive Strength and Shear