

**Analisa Perbaikan Tanah Lempung Medium Dan Soft Untuk Meningkatkan Daya Dukung  
Subgrade Jalan**

***Analysis of Improvement of Medium And Soft Clay Soil to Increase the Carrying Capacity of Road  
Subgrade.***

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***Abstrak***

Daya dukung subgrade dalam suatu perencanaan dan pekerjaan suatu konstruksi jalan. Hal ini dikarenakan tanah memiliki fungsi sebagai media penahan beban dari bangunan diatasnya. Umumnya tanah lempung memiliki daya dukung yang rendah, oleh karena itu diperlukan perbaikan tanah menggunakan metode penambahan pasir laut. Tujuan perbaikan tanah lempung medium dan soft dengan penambahan pasir puger yaitu untuk mengetahui pengaruh nilai penambahan pasir terhadap CBR (*California Bearing Ratio*) dan perubahan plastisitas, dengan penambahan presentase pasir 0%,10%,15%,20%,25%. Kemudian dilakukan pengujian laboratorium sebelum dan setelah ditambahkan pasir. Hasil pengujian atterberg limit menunjukkan bahwa penambahan pasir laut sampai 25% mengalami penurunan terhadap nilai Liquid Limit dari 38% sampai 28%, Plastis limit, dari 23,33% sampai 19,31% dan indeks plastis dari 14,67% sampai 8.69%. berdasarkan data penelitian, maka digolongkan derajad ekspansif dengan klasifikasi cukup sampai ke rendah. Nilai CBR konsistensi medium tanpa penambahan pasir 15,18% diklasifikasikan *fair*, sampai penambahan pasir 25% dapat nilai 27,7% diklasifikasikan *good*. Nilai CBR konsistensi soft tanpa penambahan pasir 6,88 % termasuk *poor*. diklasifikasikan *fair*, sampai penambahan pasir 25% dapat 17,3% termasuk *fair*.

Kata Kunci : *AttebergLimit.*, CBR. Perbaikan., *Subgrade.* dan Tanah Lempung.

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**Abstract**

*Subgrade bearing capacity in planning and working on road construction. This is because the soil has a function as a load-bearing medium for the building above it. Generally, clay soil has a low bearing capacity, therefore it is necessary to improve the soil using the method of adding sea sand. The aim of improving medium and soft clay soils with the addition of puger sand is to determine the effect of the value of adding sand on the CBR (California Bearing Ratio) and changes in plasticity, by adding a percentage of sand of 0%, 10%, 15%, 20%, 25%. Then laboratory tests were carried out before and after adding sand. The results of the Atterberg limit test show that the addition of sea sand up to 25% decreased the Liquid Limit value from 38% to 28%, the Plastic limit, from 23.33% to 19.31% and the plastic index from 14.67% to 8.69%. Based on research data, the expansive degree is classified as moderate to low. The CBR value of medium consistency without the addition of sand of 15.18% is classified as fair, up to the addition of 25% sand the value of 27.7% is classified as good. The CBR value of soft consistency without the addition of sand is 6.88%, which is considered poor. classified as fair, up to the addition of 25% sand to 17.3% is considered fair.*

*Keywords: AttebergLimit., CBR., Repair., Subgrade. and Clay Soil.*