

PENGARUH PENAMBAHAN *FLY ASH* TERHADAP STABILISASI TANAH LEMPUNG

(Studi Kasus : Desa Tamanrejo, Kecamatan Tunjungan, Kabupaten Blora,
Jawa Tengah)

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Abstrak

Jalan Provinsi Blora-Purwodadi KM 4, Desa Tamanrejo, Kecamatan Tunjungan, Kabupaten Blora seringkali ditemukan kerusakan yang terindikasi tanah tersebut bermasalah sehingga bangunan di atasnya akan beresiko mengalami kerusakan. Penelitian ini bertujuan untuk mengetahui jenis tanah asli dan pengaruh penambahan campuran *fly ash* pada tanah tersebut.

Studi penelitian ini untuk mencari nilai optimum tanah asli dan tanah menggunakan prosentase campuran *fly ash* masing-masing sebesar 8%, 13%, 18%, 23%. Pengujian yang dilakukan di laboratorium yaitu uji kadar air, berat jenis, analisa saringan, atterberg limit, direct shear, proktor modified, dan CBR.

Hasil yang diperoleh dari pengujian di laboratorium di dapat hasil kadar air, Berat Jenis (GS), Indeks Plastisitas (IP), dan kadar air optimum *proctor modified* diperoleh nilai yang menurun secara linier pada setiap sampel seiring dengan penambahan jumlah *fly ash*. Sedangkan pada hasil pengujian seperti sudut geser dalam dan CBR, diperoleh nilai yang cenderung naik pada setiap sampel dengan penambahan *fly ash*. Harga CBR tanah asli yaitu 11,37%, naik menjadi 12,50% pada campuran 8%, naik menjadi 14,09% pada campuran 13%, naik menjadi 15,07% pada campuran 18%, kemudian turun menjadi 13,73% pada campuran 23%. Dengan penambahan *fly ash* 18% hasilnya meningkat secara signifikan.

Kata kunci : Stabilisasi, *Fly Ash*, CBR

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EFFECT OF ADDING FLY ASH ON CLAY SOIL STABILIZATION
(Case Study : Tamanrejo Village, Tunjungan District, Blora Regency,
Central Java)

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Abstract

Blora-Purwodadi Provincial Road KM 4, Tamanrejo Village, Tunjungan District, Blora Regency is often found damage which indicates the land is problematic so that the building on it will be at risk of damage. This study aims to determine the type of native soil and the effect of adding fly ash mixture to the soil.

This research study is to find the optimum value of native soil and soil using the percentage of fly ash mixture of 8%, 13%, 18%, 23%, respectively. The tests carried out in the laboratory were water content, specific gravity, filter analysis, atterberg limit, direct shear, modified proctor, and CBR.

The results obtained from testing in the laboratory obtained the results of water content, Specific Gravity (GS), Plastic Index (IP), and optimum water content of proctor modified obtained values that decreased linearly in each sample along with the addition of the amount of fly ash. While the test results such as the internal shear angle and CBR, obtained values that tend to increase in each sample with the addition of fly ash. The CBR price of the original soil was 11.37%, increased to 12.50% in the 8% mixture, increased to 14.09% in the 13% mixture, increased to 15.07% in the 18% mixture, then decreased to 13,73% in the mixed 23%. With the addition of 18% fly ash the results increased significantly.

Keywords : Stabilization, Fly Ash, CBR

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