

ABSTRACT

STUDY AND ANALYSIS OF A MIXTURE OF CLAY AND RICE HUSK ASH TO THE PERMEABILITY VALUE WITH FALLING HEAD TEST

By

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Soil permeability value for every construction is different. Such differences affect the strength of a civil construction to be built. Therefore it is necessary to attempt to manipulate the soil permeability value by adding the additive to a soil permeability values obtained in order to meet the standard of civil construction to be built. Additive materials used should have a strong soil adhesive so that the permeability values obtained become smaller (closer). Among the many additives are used as soil stabilization materials, one of them is rice husk ash. Some recent researches in the field of Civil Engineering showed that rice husk ash mixture useful as a particularly clay soil stabilization. Because rice husk ash can fill the cavities that exist between the grains of ground.

Soil samples tested in this study is clay derived from Perumahan Bhayangkara, Kelurahan Beringin Jaya, Kecamatan Kemiling, Bandar Lampung. Rice husk ash used were obtained from Dusun Dantar, Kecamatan Padang Cermin, Kabupaten Pesawaran. This study was conducted to determine the effect of rice husk ash to the soil permeability values.

The results of analysis and calculations performed in the laboratory between native soil and soil with rice husk ash mixture obtained average permeability value (k) for the native soil is 1.2187×10^{-7} , 5% rice husk ash added is 1.6812×10^{-7} , 10% rice husk ash added is 5.4621×10^{-6} , and 15% rice husk ash added is $1,6151 \times 10^{-5}$.

Key words: clay, rice husk ash, permeability