ABSTRACT

UTILIZATION OF FLY ASH AS A MIXING MATERIAL OF SOIL AND LIME FOR STRENGTHENING POST-COMBUSTION BLOCK PAVING FOR STREET ENVIRONMENT

by

RESTI YULI YANTI

Block paving is one alternative of the semi-flexible pavement. In general, block paving is a composition of ground cover made of a mixture of portland cement, water and aggregate with or without other ingredients that do not reduce the quality of block paving. Therefore, it is necessary to study other alternatives about paving block of cement and sand, one of them is by using a mixture of soil, fly ash and lime.

Soil samples tested in this study come from Karang Anyar, South Lampung. The composition of the mixture used is 6%, 8% and 10%, the comparison between fly ash and lime is 1:1 with curing time for 14 days. Then testing compressive strength and water absorption power were conducted.

Based on the physical properties of the original soil testing, AASTHO classify soil samples in group A-7-6 (clay) while USCS classifies soil samples as fine-grained soil and included it in the CL group. Compressive strength value obtained is directly proportional to the amount of the composition of the fly ash and lime. The compressive strength of the samples after burning is more than the value of compressive strength samples without burning. However, the compressive strength values obtained still did not meet the specifications of the SK SNI 03-0691-1996 minimum 85 kg/cm². As for the value of water absorption power is 3% - 10% have fulfilled the specifications of paving block SK SNI 03-0691-1996.

Key words: block paving, clay, compressive strength, water absorption power