

ABSTRACT

STUDY ON THE EFFECT THE LENGTH OF TIME THE COMBUSTION PROCESS OF COMPRESSIVE STRENGTH OF BRICKS AFTER THE ADDITION OF ADDITIVE MATERIALS ISS 2500 (IONIC SOIL STABILIZER)

by

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Brick is one of the materials of building which have been long known and used by the people both in rural area as well as urban area. Brick is a material made of clay with or without additional mixture through several processes. The process includes of draining in the sun and then burning in high temperature in order to make the brick harden and not broken if it is soaked into the water. In this study used clay and additional materials ISS 2500 which has a variety of levels of 0.9 ml, 1.2 ml, 1.5 ml and 1.8 ml with the purpose to improving the quality of the bricks, as well as to compare compressive strength of bricks by modifying the length of the time combustion. So that can be known a long time the most optimal combustion.

Soil samples were tested in this study are derived from clay Nyunyai Street, District Rajabasa, Bandar Lampung. Variations of burning time is used for one day, two days and three days. Before brick printed, the soil sample that has been mixed with the ISS 2500 and cured for 7 days, after that, the soil sample is printed, then drying for 2 weeks, along with treatment without burning and burning bricks. Based on the results of physical test of originil solid, USCS classified the sample of solid as the clay with low plasticity.

Based on the results of sample's physical, USCS classify soil sample as clay with low plasticity. Compressive strength test results of the four levels of post combustion, the compressive strength maximum average post-combustion bricks are at a level of 1.8 ml with a burning for two days. The compressive strength value of 31.86 kg/cm². The compressive strength maximum average brick before combustion generated by the level of 1.8 ml in the amount of 7.79 kg/cm².

Keywords: bricks, clay, ISS 2500, compressive strength.