ABSTRACT

THE STUDY OF THE STRENGTH OF A PAIR OF BRICKS AFTER BURNT USING BAGASSE ASH MATERIALS AS ADDITIVE

By

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A brick is a synthetic stone made of clay with or without additive materials which through some process. 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. The needs of bricks will increase, so that many people build home industries to produce the bricks. To keep the quality, the made of bricks only use a specific soil. However, in this research the researcher used the worst material of soil with additive materials named the ash of bagasse in purpose to utilize the waste and to increase the strength of bricks so that it can produce cheap bricks with good quality that can be an option for bricks industries.

This research used clay from Seputh Mataram, Central Lampung, as the sample. The used variation of mixed levels were 5%, 10%, 15% and 20% and drained for 7 days, with burning process and without burning process. According to the result of physical test of original solid, USCS classified the sample of solid as the soft grained soil and it belonged to CL.

The result of the research showed that the made of bricks after burning with the mixture of the bagasse ash is up to Indonesian National Standard (SNI) of bricks for building materials. Generally, the additive of the bagasse ash to soil can reduce the value of weight of mixture solid. For the value of bricks compressive strength without burning and with well burning process showed at the additive of mixture moisture 10%-15%.

Keywords: Bricks, Clay, Bagasse ash, compressive strength