

ABSTRACT

A STUDY OF STRENGTH OF MODIFIED STANDARD DIMENSION BRICK THAT USED RICE HUSK ASH AS ADDITIVE MIXTURE BASED ON SNI

By

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Brick is a material made from clay with or without additional mixture material and it undergoes some processes and stages. Brick in this research was mixed with 5% rice husk ash with objectives to use the rice husk waste and to improve brick quality, and then to compare the modified brick from standard dimension of brick based on SNI. This research done, so that research can be used to compare with based on SNI, to get different results from dimension strength of brick modified with dimension based on SNI.

Material sample was clay soil from Yoso Mulyo village of East Metro sub district, Metro. Brick sample dimensions used for compressive strength test were 4 cm x 4 cm x 4 cm, 5 cm x 5 cm x 5 cm, 6 cm x 6 x cm 6 x cm, and 7 cm x 7 cm x 7 cm. brick samples underwent drying for 7 days and treatments with and without burning.

The original physical soil test result indicated that USCS classified soil sample as silt soil with low plasticity and belonged to ML group. Results of compressive strength tests after burning indicated that average maximum compressive strength value was 54,83 kg/cm² for sample dimension 6 cm x 6 x cm 6 x cm, and this belonged to class 50. The average maximum compressive strength value of brick sample before burning was 30,74 kg/cm² for sample dimension 4 cm x 4 x cm 4 x cm, and this belonged to class 25 based on brick compressive strength table of SNI in 1991.

Keywords: brick, silt soil, rice husk ash, compressive strength.