

ANALYSIS OF THE EFFECT OF VARIATION OF LIME STONE AND CERAMIC POWDER MIXTURE ON THE EFFICIENCY OF BIOMASS STOVES

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ABSTRACT

Biomass stove is a stove whose combustion system uses biomass fuel to produce heat through combustion for use in domestic cooking processes or other design purposes that are tailored to the needs of the user. This study was designed using the addition of 3 types of insulators namely limestone, ceramic powder and mixtures, in heating water until it reaches the boiling point of water, the addition of this insulator aims to increase the efficiency of the biomass stove. The parameter data that is used is data collection of water temperature, pot, innerwall of the stove, outer wall of the stove and ambient temperature. The results showed that the addition of an insulator greatly affected the temperature changes that occurred on the outer and inner walls of the stove and affected the efficiency value of the stove, with the highest efficiency value occurring the use of limestone insulators with an efficiency value of 24.65%.

Keywords: Biomass Stove, Insulator, Efficiency