Coffe Draft Bricket With Natural Adhesive Of Shoe Flower Leaves (Hibiscus rosa-sinensis L.)

Yuli Hananto, S. TP., M. Si

Muhammad Iqbal Guntur Tri Pamungkas

Renewable Energy Engineering

Engineering Departmen

ABSTRACT

One of the biomass materials that can be used to make briquettes is coffe grounds which has the potential to be made of fuel in the form of briquettes Biomass briquettes generally use an adhesive from tapioca. However, this material is not suitable for use in large-scale quantities because tapioca is a food ingredient. Hibiscus leaves have the potential to be used as an adhesive for coffee grounds briquettes as a substitute for tapioca. This research was conducted to make coffee grounds briquettes using hibiscus leaf adhesive and to determine the characteristics of the resulting briquettes. The briquettes were made with 25%, 30% and 35% hibiscus leaf adhesive. All briquettes produced have characteristics that meet the Indonesian National Standard for briquette quality. The best briquette composition is the 25% hibiscus adhesive treatment with 3.15% moisture content, 6.13% ash content, calorific value 5.561 cal/g, density 0.58g/cm³ and compressive strength 4.32 kg/cm².

Keywords: coffee grounds, energy, briquettes, biomass, heat