

***The Effect of Adding Cow Urine on The Process of Making Non Adhesive Briquettes From Coconut Shell Charcoal and Cow Manure***

*Mentor: Dr. Ir. Bayu Rudiyanto, ST,M.Si*

**Ahmad Mufid**

*Study Program: Renewable Energy Engineering*

**ABSTRACT**

*The use of fuel to date continues to increase, while the amount of fossil fuel reserves continues to decline. Overcoming the impact of the use of fossil fuels, the development of renewable energy becomes one of the alternatives and also at the same time to reduce the accumulated waste, so a study was conducted with the title “The Effect of Adding Cow Urine on The Process of Making Non Adhesive Briquettes From Coconut Shell Charcoal and Cow Manure”. The purpose of this research is to facilitate the briquette molding process and determine the effect of reconditioning the water content on the briquette material. The test of briquette characteristics includes moisture content, calorific value, density, ash content, combustion rate, and volatile matter, this study made 4 material treatments with the main ingredients of cow dung and coconut shell charcoal with cow urine additives, the 4 treatments include the age of cow dung material 1 day, 7 days, 14, days, and 21 days. The results showed that the reconditioning can facilitate the molding process and the briquette characteristics are classified as good in the 7-day treatment with an average moisture content of 5.379%, an average calorific value of 6,583 cal/g, an average volatile matter of 4.19%, an average density of 1.153 g/cm<sup>3</sup>, an average burning rate of 0.0056 g/sec, and an average ash content of 6.701%,*

**Keywords:** *Coconut Shell Charcoal, Cow Manure, Cow Urine, Reconditioning*