

SUMMARY

Ekho Prasetyo, Department of Mechanical Engineering, Faculty of Engineering, University Brawijaya, in Juli 2016, The effect type adhesive to physical characteristics of coconut shell charcoal briquettes, a lecturer Supervisor: Dr. Ir. Wahyono Suprpto, MT., Met and Ir. Erwin Sulisty, MT.

Fossil fuels are the main energy source at this time, the fuel reserves dwindling, causing man's search for alternative energy sources. To prevent an energy crisis, one of which is the development of renewable energy derived from organic waste or biomass. The use of waste biomass to be converted into products that have added value bioarang the utilization of natural resources which is renewable and is back to nature.

In the present study investigated the compressive strength, moisture content and porosity of coconut shell charcoal briquette with varying adhesive tapioca starch, molasses and bentonite, with the number of levels of 3%, 4%, 5%, 6% and 7%. With these variations compaction pressure of 100 Bar on the gauge for 5 minutes and the heating temperature of 100°C. The results of the study to test the strength reflects the highest values found in starch pereket 7% at 536 N / cm² and the lowest at 3% molasses adhesive of 180.4 N / cm², the highest value on the moisture content of starch adhesive 7% at 16, 66% and the lowest at 3% bentonite adhesive at 8.07%, and the porosity of the highest value on the adhesive bentonite 3% at 90.55% and the lowest at 3% molasses adhesive materials by 66.13%.

Keywords: briquettes, coconut shell charcoal, compressive strength, moisture content, porosity.