

Pemanfaatan Limbah Sludge IPAL Kawasan Industri PIER Sebagai Bahan Baku Briket. (*Utilization of sludge waste from the PIER industrial estate as raw materil for briquettes*). Supervised by: Ir. Michael Joko Wibowo,MT

Rossa Kencana Dewi
Study Program Renewable Energy Engineering
Majoring of Technique
Program Studi Teknik Energi Terbarukan
Jurusan Teknik

ABSTRACT

Most of the energy in Indonesia still uses fossils. However, these energy sources have an impact on damaging the environment. One alternative way to reduce the use of fossils is to use biomass. Briquettes are one of the biomass. This study aims to find out the best composition of WWTP sludge briquettes using tapioca flour adhesive and analyze the characteristics of briquettes made from WWTP sludge using tapioca flour adhesive with reference to SNI briquettes No. 01/6235/2000. Sludge is dried for 2-5 days or ovened at 125°C for 8 hours. then mashed and sifted using a size of 60 mesh. Briquettes are molded with a diameter of 5.6 meters with a weight of 30 g. The variety of briquettes that produce the best variation is a mixture of WWTP sludge briquettes with tapioca flour adhesive with a composition of 90% WWTP sludge and 10% tapioca flour, where the moisture content is 3.40 %, the calorific value is 2.491 cal/g, the ash content is 49.8%, the density is 2.30 g /cm³, the kamba density is 0.41 g / cm³, and the combustion rate is 0.0085 (g /s).

Key word: , Briquettes, sludge WWTP, tepung tapioka, biomass.