ABSTRACT

Biogas from Waste Liquid Factory Tofu with established fermentation processes to produce alternative fuels as well as tackling the energy crisis and the limited fossil fuel reserves in the world. The factory is planned located in Batang, Central Java and operate semi-continue for 24 hours per day and 330 days per year. The resulting production capacity of 2530.178 kg per day of biogas with a purity of 89.5%.

Biogas plant production process of Tofu Liquid Waste by this fermentation process has three stages of the process description. The first stage, wastewater know neutralized. The second stage effluent know fermented into biogas in the fermentation tank at a temperature of 300 C and atmospheric pressure to produce biogas with a purity of 80%. The third stage of purification of biogas with membrane separation to produce a biogas with a purity of 89.5%.

To achieve the production capacity, raw material used 100,000 kg / day of wastewater to know the carbohydrate composition of 1.94%, protein0.05%, fat 0.01% acetic acid 5% water 93% as well as auxiliary materials: antifoam 1.01 kg, 125.12 kg of 50% NaOH, PHP 10097.07 kg. Biogas plant water needs to include: water sanitation, cooling water, process water, boiler feed and water respectively - each of 84 m3/day, m3/day 357.19, 125.12 m3/day, 192.14 m3/day.

Keyword : Biogas, tofu wastewater, fermentation