BAB 10

KESIMPULAN

Perencanaan pembuatan biogas dari eceng gondok merupakan sebuah usaha untuk membantu menciptakan sumber energi terbarukan yang ramah lingkungan. Bahan baku utama adalah eceng gondok dan kotoran sapi yang tersedia melimpah di Indonesia dan pemanfaatannya masih sangat minim, sehingga persaingan untuk mendapatkan bahan baku masih relatif rendah Eceng gondok dan kotoran sapi akan difermentasi secara anaerobik dalam 2 tahap untuk memperoleh konversi gas metana yang maksimum dalam biogas. Tangki digester 1 dirancang dengan bahan konstruksi SA-240 tipe 304 yang tahan korosi dan memiliki *allowable stress* cukup besar. Tangki berbentuk silinder tegak, dengan tutup atas berupa *torispherical dishead* dan tutup bawah berbentuk konis untuk memudahkan pengeluaran *slurry* dalam tangki. Dalam merancang tangki *digester* untuk produksi biogas dari eceng gondok ini didapatkan dimensi tangki dengan diameter dalam sebesar 3,25 m, tinggi tangki total sebesar 6,41 m, tebal *shell* 0,25 in, tebal head 0,375 in, dan tebal *bottom* 0,375 in. Proses yang sederhana, mudah, serta tidak membutuhkan suhu tinggi membuat produksi biogas dari eceng gondok sangat mungkin untuk direalisasikan ke dalam tahap produksi biogas. Diharapkan dengan adanya pembuatan biogas dari eceng gondok ini dapat membantu pemerintah dalam menangani penyediaan bahan bakar gas, khususnya untuk mengurangi kebutuhan akan LPG yang sering digunakan untuk memasak, sekaligus membantu menyelesaikan permasalahan lingkungan perairan akibat *blooming* eceng gondok yang terjadi Indonesia.

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