ABSTRACT

***Yun Samaniah**, Engineering Physics, Engineering Faculty Telkom University, Februari 2014, Design and Implementation Biogas Reactor Using Temperatur Control in Mesophilic Phase, Adviser lecturer : M. Ramdlan Kirom, M.Si. as first adviser lecturer and Reza Fauzi I, S.Pd., M.T. as second adviser lecturer.*

Depletion of fosil energy resources coming of continually using can lead to crisis of energy. Therefore needed alternative resource energy that renewable such a renewable energy. Either renewable energy that can be used is waste disposal which available such a biogas.

Aims of this final project are designing and implementing biogas reactor using temperatur control in mesophilic phase along with knowing comparation yield of methane production. This research using independent variable says temperatur conditioning in reactor. Data acquired based on directly observation using two variations that are anaerobic process using mesophilic temperatur control and anaerobic process without using temperatur control. Data acquired are time production and volume of methane production.

Based on the research can be conclude that anaerobic process that keeping temperatur on 35^0C can abridge time of methane production lead to optimum from 18^{th} becoming 14^{th}. Besides anaerobic process that keeping temperatur on 35^0C also can enlarge methane volume become 25 bigger than without keeping temperatur.

Keywords : biogas reactor, temperatur control system, comparation yield of methane gas