Abstraksi

Glicerol plant from crude palm oil with continuous fat splitting process has the capacity 1839.6 ton/year. Glicerol is used, especially as raw material for the manufacture of synthetic resins, ester gum, drugs medicine, cosmetics and toothpaste. Location of this plant in Rokan Hilir, Riau is based on materials oriented.

In this study, the process of hydrolysis continuous fat splitting is chosen because it can produce products with high purity (99%) and without a catalyst, a relatively faster reaction time of 2 hours and easy to separate the products. In this process, oils and water as the main raw material is reacted into glycerol and fatty acids with steam in the counter current splitting tower at temperature of $260^0C$ and pressure of 50 atm. The top product of the tower is the oil phase and the bottom is the water phase. Then glycerol at the water phase was purified from fatty acids, water and impurities.

The plant was planned to operate continuously for 365 days/year and 24 hours/day to reach 99% product quality. It requires crude palm oil of 2500 kg/h, 0.047 kg/h NaOH 11.06%, and 3.29 kg/h activated carbon. The required utility was for water sanitation of 0.5 $m^3/h$, for boiler feed water of 1.85 $m^3/h$, for cooling water of 10.77 $m^3/h$, and for water process of 0.56 $m^3/h$.

**Key Word**: Glycerol, crude palm oil, hydrolysis