ANALISIS KERJA KONDENSOR PADA SISTEM DISTILATOR BIOETANOL TIPE *BATCH*

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ABSTRAK

Penelitian "Analisis Kerja Kondensor pada Sistem Distilator Bioetanol Tipe *Batch"* telah dilaksanakan menggunakan metode eksperimental di laboratorium. Bahan yang digunakan dalam penelitian ini adalah nira aren sebanyak 40,50 liter yang terfermentasi selama 90 jam. Distilasi berlangsung selama 8 jam dan menghasilkan 1,80 liter bioetanol. Distilasi optimal terjadi setelah 4 jam dengan suhu pipa kondensor 32˚C, suhu air pendingin 31,60˚C, dan perpindahan panas optimal terjadi setelah 8 jam diindikasikan dengan Bilangan Nusselt sebesar 9,75.

Kata kunci: Kondensor, Distilasi Bioetanol Sistem *Batch*, Nira Aren.

ANALYSIS OF CONDENSER PERFORMANCE ON BATCH SYSTEM BIOETHANOL DISTILLATION

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ABSTRACT

The research "Analysis of Condenser Performance on Bioethanol Distillation Batch System" has been done by experimental methods in the laboratory. The material in this study was 40.50 liters of palm sugar which is fermented for 90 hours. Distillation last for 8 hours and produced 1.80 liters of bioethanol. Optimal distillation occurred after 4 hours with the condenser pipe temperature is 32˚C, cooling water temperature is 31.60˚C and optimal heat transfer occurred after 8 hours indicated by Nusselt Number is 9.75.

Keywords: Condenser, Bioethanol Distillation Batch System, Palm sugar