



## BAB V

### KESIMPULAN DAN SARAN

#### 5.1 Kesimpulan

Berdasarkan hasil penelitian yang diperoleh, maka kesimpulan yang dapat ditarik dari penelitian ini adalah:

1. Model paling cocok untuk menggambarkan perubahan *reboiler duty* terhadap fraksi produk serta terhadap laju *bottom* adalah SOPDT dengan *Lead Time (overdamped)*.
2. Model paling cocok untuk menggambarkan perubahan laju *2-ethylhexanol* terhadap fraksi produk adalah SOPDT dengan *Lead Time (overdamped)* serta terhadap laju *bottom* adalah SOPDT *underdamped*.
3. Perubahan fraksi *2-ethylhexyl dodecanoate* akibat perubahan *reboiler duty* terjadi secara linear.
4. Perubahan fraksi *2-ethylhexyl dodecanoate* akibat perubahan laju alir *2-ethylhexanol* serta perubahan fraksi *2-ethylhexyl dodecanoate* dan laju alir *bottom* akibat perubahan laju alir *2-ethylhexanol* tidak terjadi secara linear.
5. Perubahan *reboiler duty* memberikan pengaruh yang lebih besar terhadap fraksi produk yang dihasilkan dan laju alir *bottom* jika dibandingkan dengan perubahan *2-ethylhexanol*.
6. Fraksi *2-ethylhexyl dodecanoate* serta laju alir *bottom* lebih responsif terhadap perubahan *reboiler duty* dibandingkan dengan perubahan *2-ethylhexanol*.

#### 5.2 Saran

Saran yang dapat disampaikan oleh penulis setelah menyelesaikan penelitian ini adalah:

1. Melakukan simulasi dinamik dengan pasangan input dan output yang berbeda.
2. Melanjutkan penelitian hingga perancangan *controller*.



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