Distillation Column Simulation using DWSIM

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Problem: Simulation of Distillation Column

A 3600 kmol/h feed consisting 30% (by mole) Benzene, 30% Toluene and 40% O-xylene enters a distillation column at 1 bar and 120°C. The feed is to be separated through direct/indirect distillation column sequence such that the products are atleast 99% pure. The column is operated at 1.3 times the minimum reflux ratio. The total condenser pressure is 1 bar and reboiler pressure is 1 bar. Using Peng-Robinson property package, simulate the distillation column.

Input Data

- **Components: Benzene, Toluene, O-xylene**
- **Thermodynamic Property Package: Peng-Robinson**
- **Feed Mass Flow Rate: 3600 kmol/h**
- **Feed Pressure: 1 bar**
- **Feed Temperature: 120°C**
- **Mole Fraction of Benzene: 0.3**
- **Mole Fraction of Toluene: 0.3**
- **Mole Fraction of O-xylene: 0.4**

Get in touch

- https://dwsim.fossee.in
- **Completed Flowsheets:** https://dwsim.fossee.in/flowsheeting-project/completed-flowsheet
- **Mail us at:** contact-dwsim@fossee.in

Thanks
for your time and patience