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Product Name:

Comparison Of Rectification Columns

Product Code: LBNY-0005-1270004



Description:

Distillation is a separation process that includes the partial evaporation of a liquid phase and the condensation of the resulting gas phase. The rectification columns are used for the separation of liquid phases. They operate according to the principle of distillation. The substance mix recommended for the operation of the experimental plant is water-ethanol. The separation process of rectification is an energy-efficient distillation process with several stages.

Learning objectives/experiments:

Determination of the proportion of ethanol in the feed and in the products

Determination of the tray efficiency of the sieve trays

With different reflux ratios

With different feed levels

Investigation and comparison of a sieve tray column and a packed column

Evaluation using the McCabe-Thiele Diagram

In continuous operation

With different pressures.

Technical Specification:

Continuous rectification with packed column or sieve tray column

Tanks for feed, bottom and top product made of glass and stainless steel

Operation at up to 115°C and 1,5bar

Variable reflux ratio

Recording of all relevant variables with more than 40 sensors

PLC with touch panel for control of the plant
Packed column with pall rings with 10 feed levels and temperature measurement
Sieve tray column with 10 trays; each tray with feed and temperature measurement.



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