

"Batch" distillation with plates

DESCRIPTION

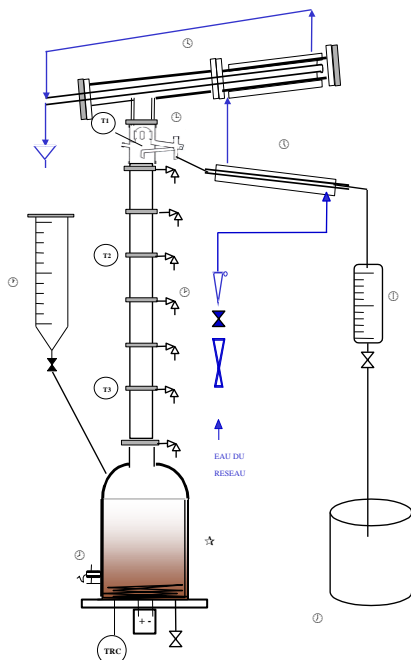
- v Permits the separation of the components of a liquid mixture due to their differences in boiling point. The mixture is heated producing vapours leaving a residue behind. The vapours are then condensed and collected.
- v Material used resists corrosion.
- This unit is made for batch distillation at atmospheric pressure or under reduced pressure.
- A user manual and technical documentation is provided.



PEDAGOGIC APPLICATIONS

- Study of a batch process
- Thermal and material balances
- Determination of the theoretical number of fractions (and plates required) through the methods of Mac Cabbe Thiele or Ponchon Savarit
- Result of obstruction of the column
- Computation of the minimum reflux ratio

MAIN COMPONENTS



1. Substructure

- Borosilicate glass
- 2-kW-electric heating element

2. Supply tank

- Borosilicate glass

3. Distilling column DN 50

- Height : 1000 mm
- Lagged
- 5 perforated or perforated (316 L) bubble cap plates

4. Manual reflux head

- Borosilicate glass

5. Condenser

- Glass and stainless - 316 L
- Exchange area : 0.3 m²

6. Cooling exchanger of the distillate

- Borosilicate glass

7. Receiver for the distillate

- Borosilicate glass
- Volume : 0.5 L- graduated

8. Distillate tank

- Polyethylene

9. Low level sensor

- Capacitive sensor

TEMPERATURE MEASUREMENTS

TRC : Temperature in the reactor

T1 : Temperature of the vapour in the top of the column

T3, T4 : Temperature in the column

OPTIONS

- ⇒ Other column height and other condenser
- ⇒ Use of a thermosiphon heating tube with electric resistance or thermoregulator
- ⇒ Electromagnetic reflux head

UTILITIES

Electricity : 220/380 VAC – 50/60 Hz

Network water

Exhaustion

DIMENSIONS

Length : 1200 mm

Width : 800 mm

Height : 1800 mm

Weight : 140 kg