



Controlled Absorption & Regeneration unit

Référence : ABR/3000



CO₂ capture technology implementation

Unit delivered with educational handbook and technical documentation.

Possibility to customize the unit

Commissioning on site

Training on site

GENERAL SPECIFICATIONS

- Absorption column, glass Raschig rings packing.
- Liquid distributor.
- 2 gear pumps.
- SS exchanger, energy recovery.
- SS preheating exchanger.
- SS cooling exchanger.

- Regeneration column, glass Raschig rings packing.
- 6L glass boiler with inside SS coil.
- Condenser, glass shell, SS coil.
- Reflux line.
- Gas mixture feeding circuit, with control mass flowmeters.
- Steam line, with control valve.
- 2 CO₂ transmitter—analysers.

Instrumentation

- 12 temperature probes Pt100Ω.
- Level detector (pressure transmitter).
- 2 manometers.
- 2 CO₂ analysers.
- Differential pressure transmitter.

Dim : 155 x 80 x 280 cm – 450 kg
SS tubular framework 40 x 40mm

Categories: Absorption Chemical processing Educational Engineering

Reference: ABR/3000

DESCRIPTION

Liquid-Gas absorption process

Solvent regeneration process (degassing with heat)

Process effectiveness study

Mass balance, thermal balance, yield

The solute migration phenomenon from the gas to the liquid phase occurs when both phases

are contacted in the packing of the reverse flow absorption column.

This highlights the absorption operation (solvent purification).

The regeneration phenomenon is observed on the second column, which is continuously fed.

An energy-saving heat exchanger is placed between the two columns to optimize the power spent on the unit.

A second heat exchanger is placed on the absorption side to cool the fluid returning to the head of the column.

The third heat exchanger, placed on the regeneration side, allows the solution to be heated in order to be regenerated in column.

The use of such a unit allows one to remove CO₂ from air using monoethanol amine and to recover pure CO₂ to capture it.



Unités livrées avec un manuel pédagogique et dossier technique



Possibilité d'adapter les unités à vos besoins



Mise en service, formation des formateurs