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Product Name :
Gas Absorption

Product Code :
LBNY-0005-12700010



Description :

Absorption is used to remove one or more gaseous components from a gas flow using a solvent. The flow rates of the gas components are displayed. A compressor delivers the gas mixture into the lower section of the absorption column. First of all, a CO₂ and air gas mixture is produced. Water is used as the solvent. The CO₂ is absorbed by the downward flowing water. As the pressure is reduced and the temperature is increased, the solubility of the CO₂ falls. A heater heats the water. A water jet pump generates the vacuum in the desorption column and causes the CO₂ gas to be emitted from the water. To separate the absorbed CO₂, the charged water is then fed from the lower section of the absorption column into a desorption column. It is possible to adjust the mixing ratio using valves. A pump then delivers the regenerated solvent back into the absorption column. The water temperature can be controlled. Flow rate, temperature and pressure are continuously measured. In the column, part of the CO₂ is separated in the counterflow with the solvent.

Technical Specification :

Separation of CO₂/air mixture by absorption in counterflow with water.
Continuous solvent regeneration in circuit with desorption column under vacuum.
1 pump for desorption column and 1 pump for returning solvent to absorption column.
Adjustment of mixing ratio using valves.
Compressor for delivering the gas mixture into the absorption column.
Water temperature control with heater and refrigeration system.
Production of gas mixture using CO₂ from compressed gas cylinder and ambient air.



Laboratory Instrument India