

Title (en)
Process and apparatus for air separation by rectification.

Title (de)
Verfahren und Vorrichtung zur Luftzerlegung durch Rektifikation.

Title (fr)
Procédé et dispositif de séparation de l'air par rectification.

Publication
EP 0299364 A2 19890118 (DE)

Application
EP 88110876 A 19880707

Priority
DE 3722746 A 19870709

Abstract (en)
[origin: JPS6479574A] PURPOSE: To produce high purity oxygen and nitrogen by providing a two stage rectification column, a rough argon column coupled with the second stage and a high purity oxygen column coupled with the rough argon column through sideway take-out piping. CONSTITUTION: Oxygen-rich fraction from the sample at the first rectification stage 2 is taken out through piping 8, supercooled by a heat exchanger 5 and taken out from the intermediate section of higher temperature than nitrogen-rich fraction being supplied independently. A part of the oxygen-rich fraction cooled down to about -182 deg.C is fed to the intermediate section of a second rectification stage 6 and the remainder is led, as coolant, to a condenser/evaporator 9 on top of a rough argon column 10. The second rectification stage 6 operating at about -179 deg.C and about 1.6 bar separates the previously separated fraction from the first stage 2 into high purity oxygen and nitrogen. Liquid fraction is taken out from the rough argon column 10 through piping 22 and fed to a high purity oxygen column 23 and high purity liquid oxygen is taken out from the sample at the column 23 through piping 25.

Abstract (de)
Dieses Verfahren dient zur Luftzerlegung durch Rektifikation. Im Anschluß an eine zweistufige Rektifikation 3 wird aus einer Rohargonkolonne 10 eine Fraktion 22 einige Böden oberhalb des Sumpfes entnommen, in eine Reinstsauerstoffkolonne 23 eingeführt und dort in eine Restgasfraktion 24 und in hochreinen Sauerstoff 25,26 zerlegt. Zusätzlich oder alternativ hierzu kann mit Hilfe einer Reinststickstoffkolonne 31, in die stickstoffreiches Gas 27 aus der ersten Rektifizierstufe 2 eingespeist wird, hochreiner Stickstoff hergestellt werden. Die Sumpffraktion 29 aus der Reinststickstoffkolonne 31 wird in die erste Rektifizierstufe 2 zurückgeführt, aus der einige Böden unterhalb des Kopfes hochreiner Stickstoff 34 entnommen wird.

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