

Title (en)
PROCESS AND APPARATUS FOR AIR SEPARATION BY RECTIFICATION

Publication
EP 0299364 B1 19901227 (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.

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F25J 3/04

IPC 8 full level
F25J 3/04 (2006.01)

CPC (source: EP US)
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Citation (examination)
EP 0136926 A1 19850410 - AIR LIQUIDE [FR]

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EP2662653A1; US4977746A; EP0542405A1; EP0377354A1; EP0589646A1; US5363656A; EP3067649A1; FR2694383A1; US5333463A; EP0834711A3; EP0376465A1; US5106398A; EP3327393A1; WO2023083488A1; WO9321488A1

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