

Title (en)

Process and apparatus for the production of oxygen enriched fluid by cryogenic distillation

Title (de)

Verfahren und Vorrichtung zur Erzeugung von sauerstoffreicher Flüssigkeit durch kryogenische Luftzerlegung

Title (fr)

Procédé et appareil de production d'un fluide enrichi en oxygène par distillation cryogénique

Publication

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Application

EP 01400749 A 20010322

Priority

FR 0004284 A 20000404

Abstract (en)

Cryogenic distillation enables pure oxygen (95% minimum) to be obtained from a mixture containing nitrogen, oxygen and argon. The production of an oxygen (O₂)-enriched flow in a cryogenic distillation unit comprises the following stages: (a) cooling of a supply (1) containing O₂, nitrogen (N₂) and argon (Ar) and introduction in a distillation unit comprising an auxiliary column (25) for the separation of a flow (29) containing Ar and O₂, the unit comprising two other columns (9,18); (b) separation of the flow to form fluids enriched in O₂ and N₂ (15,33); (c) conveyance of the flow containing Ar and O₂ from one of the columns (18) to the auxiliary column, both operating at 2-10 bars; (d) withdrawal of an O₂-enriched flow (37) containing at least 95% mol of O₂; and (e) withdrawal of an Ar-enriched flow (49) from the auxiliary column. Part of the Ar-enriched flow is rejected to atmosphere and/or acts as an adsorbent bed (4) regenerator and/or part may be mixed with an N₂-enriched gas (47) from the unit, or from another unit. An independent claim is also included for the apparatus for the above process.

Abstract (fr)

Une installation de séparation d'air comprend au moins trois colonnes dont une colonne auxiliaire (25) et deux autres colonnes (9,11,40), dont au moins une alimentée par de l'air et dont celle opérant à la pression la plus basse opère entre 2 et 10 bars. Un débit contenant entre 40 et 95% mol. d'argon provenant de la colonne auxiliaire est éventuellement mélangé avec un gaz enrichi en azote de la colonne opérant à la pression plus basse. La colonne auxiliaire opère à la même pression que la colonne dont elle est alimentée. <IMAGE>

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Citation (search report)

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