

Title (en)

METHOD AND APPARATUS FOR PRODUCING NITROGEN BY COMBINED GAS PERMEATION AND ADSORPTION

Title (de)

VERFAHREN UND VORRICHTUNG ZUR STICHSTOFFERZEUGUNG DURCH KOMBINATION VON GASPERMEATION UND ADSORPTION

Title (fr)

PROCEDE ET INSTALLATION DE PRODUCTION D'AZOTE PAR PERMEATION GAZEUSE ET ADSORPTION COMBINEES

Publication

**EP 0717656 A1 19960626 (FR)**

Application

**EP 95924359 A 19950623**

Priority

- FR 9500840 W 19950623
- FR 9408450 A 19940708

Abstract (en)

[origin: WO9601679A1] A method for producing high-purity nitrogen by separating a nitrogen- and oxygen-containing gas mixture in a permeation separation apparatus (9) and feeding the resulting nitrogen-enriched gas into an adsorption apparatus (A, B). Part of the residual gas in the adsorption apparatus may be recycled by mixing it with the mixture to be separated or using it as a scavenging gas in the permeation separation apparatus (9).

IPC 1-7

**B01D 53/22**

IPC 8 full level

**B01D 53/04** (2006.01); **B01D 53/22** (2006.01); **C01B 21/04** (2006.01)

CPC (source: EP KR)

**B01D 53/22** (2013.01 - KR); **B01D 53/229** (2013.01 - EP); **C01B 21/0438** (2013.01 - EP); **C01B 21/045** (2013.01 - EP)

Citation (search report)

See references of WO 9601679A1

Designated contracting state (EPC)

BE DE ES FR IT NL

DOCDB simple family (publication)

**WO 9601679 A1 19960125**; CN 1130361 A 19960904; EP 0717656 A1 19960626; FR 2722114 A1 19960112; FR 2722114 B1 19960823; JP H09502658 A 19970318; KR 960704616 A 19961009

DOCDB simple family (application)

**FR 9500840 W 19950623**; CN 95190613 A 19950623; EP 95924359 A 19950623; FR 9408450 A 19940708; JP 50414695 A 19950623; KR 19960701122 A 19960306