

Title (en)

Process and apparatus for expanding and compressing at least one gaseous stream

Title (de)

Entspannungs- und Kompressionsverfahren und Einrichtung wenigstens eines Gasstromes

Title (fr)

Procédé et installation de détente et de compression d'au moins un flux gazeux

Publication

EP 0710809 A1 19960508 (FR)

Application

EP 95402338 A 19951020

Priority

FR 9412715 A 19941025

Abstract (en)

The procedure consists of compressing a first flow of a gas mixture in a compressor (5) with at least one compression stage (5A, 5B, 5C), compressing a second gas mixture flow to a higher pressure in a compressor (7), expanding a third flow of a gas mixture in an expander (9), recuperating at least part of the energy generated by the expander with the compressor (7), and feeding at least part of the second flow back to one stage (5B) of compressor (5). The first and second flows are of air destined to be distilled in an air distillation plant, while the third gas flow is a product of the distillation plant (13). Appts. is also claimed.

Abstract (fr)

Dans un procédé de compression et de détente d'au moins un flux gazeux, une partie de l'énergie générée par une turbine (9) est récupérée par un surpresseur (7), connecté en parallèle avec au moins un étage (5A, 5B, 5C) d'un compresseur (5). Préférentiellement, la turbine détend de l'azote provenant d'un appareil de distillation d'air, auquel de l'air comprimé par le compresseur et le surpresseur est destiné. <IMAGE>

IPC 1-7

F25J 3/04

IPC 8 full level

F01D 13/02 (2006.01); **F02G 5/02** (2006.01); **F25B 9/06** (2006.01); **F25J 3/02** (2006.01); **F25J 3/04** (2006.01)

CPC (source: EP US)

F25J 3/04018 (2013.01 - EP US); **F25J 3/04139** (2013.01 - EP US); **F25J 3/04309** (2013.01 - EP US); **F25J 3/04315** (2013.01 - EP US); **F25J 3/04381** (2013.01 - EP US); **F25J 3/04412** (2013.01 - EP US); **F25J 2200/20** (2013.01 - EP US); **F25J 2230/24** (2013.01 - EP US); **Y10S 62/91** (2013.01 - EP US)

Citation (applicant)

- EP 0557935 A1 19930901 - PRAXAIR TECHNOLOGY INC [US]
- DE 2854508 A1 19800619 - LINDE AG
- DE 2557453 A1 19770630 - LINDE AG

Citation (search report)

- [A] FR 2690982 A1 19931112 - AIR LIQUIDE [FR]
- [A] FR 2686405 A1 19930723 - AIR LIQUIDE [FR]
- [A] US 4595405 A 19860617 - AGRAWAL RAKESH [US], et al

Designated contracting state (EPC)

DE GB IT

DOCDB simple family (publication)

EP 0710809 A1 19960508; **EP 0710809 B1 20010221**; BR 9504523 A 19970527; CN 1086445 C 20020619; CN 1133392 A 19961016; DE 69520134 D1 20010329; DE 69520134 T2 20010719; FR 2726046 A1 19960426; FR 2726046 B1 19961220; JP H08226758 A 19960903; US 5560223 A 19961001

DOCDB simple family (application)

EP 95402338 A 19951020; BR 9504523 A 19951024; CN 95120507 A 19951024; DE 69520134 T 19951020; FR 9412715 A 19941025; JP 27583895 A 19951024; US 42080195 A 19950412