

Title (en)

Process and device for the production of nitrogen from air

Title (de)

Verfahren und Vorrichtung zur Erzeugung von Stickstoff aus Luft

Title (fr)

Procédé et dispositif pour la production d'azote à partir de l'air

Publication

EP 1314941 A3 20030827 (DE)

Application

EP 02025985 A 20021121

Priority

DE 10157544 A 20011123

Abstract (en)

[origin: EP1314941A2] Apparatus for producing nitrogen from air comprises a turbo-compressor (2) having pinions (2a, 2d); an air purifying unit (3); a heat exchanger (5); a rectification column (6) consisting of rectifying devices (6a, 6b) and a sump evaporator (7); and a super-condenser (8). The components are joined together by a pipe system having measuring, controlling and regulating devices. <??>An Independent claim is also included for a process for producing nitrogen from air. Preferred Features: The heat exchanger, rectification column and super-condenser are arranged in a deep-cooled insulated cold box (18).

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F25J 3/04

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [X] US 3886758 A 19750603 - PERROTIN GUY, et al
- [A] DE 4030750 A1 19920402 - LINDE AG [DE]
- [PA] EP 1193457 A1 20020403 - AIR PROD & CHEM [US]
- [X] EP 1134524 A2 20010919 - LINDE AG [DE]
- [A] GB 1392294 A 19750430 - BRITISH OXYGEN CO LTD
- [A] US 5404725 A 19950411 - ARRIULOU PASCAL [FR]
- [A] US 4088464 A 19780509 - BIGI EMANUELE
- [A] DE 1199293 B 19650826 - LINDE EISMASCH AG
- [A] "INTEGRATED AIR BOOSTER AND OXYGEN COMPRESSOR FOR PARTIAL PUMPED LOX CRYOGENIC AIR SEPARATION PROCESS CYCLE", RESEARCH DISCLOSURE, KENNETH MASON PUBLICATIONS, HAMPSHIRE, GB, NR. 403, PAGE(S) 845-846, ISSN: 0374-4353, XP000726747
- [A] PATENT ABSTRACTS OF JAPAN vol. 016, no. 007 (M - 1198) 9 January 1992 (1992-01-09)

Cited by

CN111928576A; WO2021204418A1; WO2022179748A1

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