

Title (en)  
METHOD AND DEVICE FOR THE PRODUCTION OF VARIABLE AMOUNTS OF A PRESSURIZED GASEOUS PRODUCT

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR VARIABLEN ERZEUGUNG EINES GASFÖRMIGEN DRUCKPRODUKTS

Title (fr)  
PROCEDE ET DISPOSITIF DE PRODUCTION VARIABLE D'UN PRODUIT GAZEUX COMPRI ME

Publication  
**EP 0842385 B2 20031203 (DE)**

Application  
**EP 96927545 A 19960718**

Priority  
• DE 19526785 A 19950721  
• EP 9603175 W 19960718

Abstract (en)  
[origin: DE19526785C1] In the method proposed, charge air is fed to a cryogenic rectifying system (15, 16) where it is split up into its constituent gases, and a liquid fraction (31, 32) is taken off and passed into a first storage tank (33). The pressure of any suitable amount of the liquid fraction (34) is increased (35). The liquid fraction (36) is then evaporated under the increased pressure by indirect heat exchange (12) and converted into a pressurized gaseous product (37). A heat-transfer fluid circulates in a refrigeration circuit fitted with a compressor (41, 42). Part (45) of the flow of heat-transfer fluid (44) compressed in the compressor (41, 42) is fed to the indirect heat-exchange unit (12) where the liquid fraction (36) is evaporated and the heat-transfer fluid (44) at least partly liquefied. Another part (59) of the flow of heat-transfer fluid (44) compressed in the compressor (41, 42) is allowed to expand (43), doing useful work. Liquefied heat-transfer fluid (45, 48) is stored in a buffer storage tank (49).

IPC 1-7  
**F25J 3/04**

IPC 8 full level  
**F25J 3/04** (2006.01)

CPC (source: EP KR US)  
**F25J 3/04** (2013.01 - KR); **F25J 3/0409** (2013.01 - EP US); **F25J 3/04103** (2013.01 - EP US); **F25J 3/04224** (2013.01 - EP US); **F25J 3/04309** (2013.01 - EP US); **F25J 3/04357** (2013.01 - EP US); **F25J 3/04393** (2013.01 - EP US); **F25J 3/04412** (2013.01 - EP US); **F25J 3/04509** (2013.01 - EP US); **F25J 2205/02** (2013.01 - EP US); **Y10S 62/913** (2013.01 - EP US)

Citation (opposition)  
Opponent :  
• JP H02293575 A 19901204 - KOBE STEEL LTD  
• JP H0455682 A 19920224 - KOBE STEEL LTD  
• DE 1056633 C  
• US 3216206 A 19651109 - GODEHARDT KESSLER  
• W.ROHDE: "Luftzerlegungsanlage mit Wechselspeicherung für variable Sauerstofflieferung", no. 54, 1 January 1984 (1984-01-01), pages 18 - 20, XP002019668  
• Schönplflug et al., "Recent Advances in Air Separation Technology", 13th ICEC Proceedings, Beijing, China, 24.-27.04.90, in: Cryogenics 1990, vol. 30, September Supplement, S. 17-22

Cited by  
EP2801777A1; DE102013017590A1; EP2647934A1; DE102012006746A1; DE102007031765A1; EP2015012A2; EP2312248A1; EP2520886A1; EP2600090A1; DE102007031759A1; EP2963371A1; EP2015013A2; DE102009034979A1; DE102012017488A1; EP2963369A1; EP2963367A1; WO2016005031A1; EP2458311A1; DE102010052545A1; DE102011121314A1; EP2784420A1; DE102010052544A1; EP2466236A1; EP2568242A1; DE102011112909A1; WO2014154339A2; EP2963370A1

Designated contracting state (EPC)  
DE DK ES FR GB IT SE

DOCDB simple family (publication)  
**DE 19526785 C1 19970220**; AU 6734496 A 19970218; AU 719608 B2 20000511; BR 9609781 A 19991221; CA 2227050 A1 19970206; CN 1134638 C 20040114; CN 1191600 A 19980826; DE 59606808 D1 20010523; DK 0842385 T3 20010806; DK 0842385 T4 20040322; EP 0842385 A1 19980520; EP 0842385 B1 20010418; EP 0842385 B2 20031203; ES 2158336 T3 20010901; ES 2158336 T5 20040701; JP 3947565 B2 20070725; JP H11509615 A 19990824; KR 100421071 B1 20040417; KR 19990035798 A 19990525; MX 9800557 A 19980430; TW 318882 B 19971101; US 5953937 A 19990921; WO 9704279 A1 19970206; ZA 966146 B 19970204

DOCDB simple family (application)  
**DE 19526785 A 19950721**; AU 6734496 A 19960718; BR 9609781 A 19960718; CA 2227050 A 19960718; CN 96195699 A 19960718; DE 59606808 T 19960718; DK 96927545 T 19960718; EP 9603175 W 19960718; EP 96927545 A 19960718; ES 96927545 T 19960718; JP 50629897 A 19960718; KR 19980700457 A 19980121; MX 9800557 A 19960718; TW 85108600 A 19960716; US 98357298 A 19980323; ZA 966146 A 19960719