

Title (en)  
Integrated process for air separation and energy generation

Title (de)  
Integriertes Verfahren zur Luftzerlegung und Energieerzeugung

Title (fr)  
Procédé intégré de séparation d'air et de génération d'énergie

Publication  
**EP 1223395 B2 20130515 (FR)**

Application  
**EP 01403286 A 20011218**

Priority  
FR 0100403 A 20010112

Abstract (en)  
[origin: EP1223395A1] Air separation procedure produces fluid rich in oxygen and optionally a fluid rich in nitrogen in a plant comprising at least two air separators each having at least two distillation columns, an air compressor, a combustion chamber, and an expansion turbine. The amount of cryogenic liquid produced by the second separator in relation to the treated air flow is greater than that produced by the first separator. The air separation procedure produces a fluid rich in oxygen and optionally a fluid rich in nitrogen in a plant comprising at least two air separators (1, 101), each having at least two distillation columns, a first air compressor (13), a first combustion chamber (17), and a first expansion turbine (19). The first compressor feeds compressed air to the first separator and combustion chamber, while the second separator is fed with compressed air by an auxiliary compressor (21). A nitrogen-rich gas is fed to the first air separator upstream of the expansion turbine, which is fed with combustion gases from at least one combustion chamber (17). Nitrogen-rich gas from the first and second air separators also delivered upstream of the expansion turbine. In addition, the amount of cryogenic liquid produced as an end product by the second separator in relation to the treated air flow is greater than that produced by the first separator. An Independent claim is included for a plant in which the above process is performed.

IPC 8 full level  
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Citation (opposition)  
Opponent :

- J.M.ABRARDO ET AL: "Oxygen Plants for IGCC", PROC. 7TH INTER-SOCIETY CRYOGENICS SYMP., 1991, pages 37 - 42
- SIEMENS AG, PROVEN POWER GENERATION SOLUTION FOR INTEGRATED GASIFICATION COMBINED CYCLES USING REFINERY RESIDUES AND COAL, 2000
- T.UBIS ET AL: "The 800 MWe IGCC Project", GASIFICATION TECHNOLOGY CONFERENCE, October 2000 (2000-10-01), SAN FRANCISCO, pages 1 - 9
- RESEARCH DISCLOSURE 39133, November 1996 (1996-11-01)

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