

Title (en)  
Process and apparatus for the separation of air by cryogenic distillation

Title (de)  
Verfahren und Anlage zur Lufttrennung durch kryogene Destillation

Title (fr)  
Procédé et installation de séparation d'air par distillation cryogénique

Publication  
**EP 0884543 A1 19981216 (FR)**

Application  
**EP 98401366 A 19980608**

Priority  
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Abstract (en)  
Air is separated by cryogenic distillation in a double column. A part (7) of the incoming air is fed to medium pressure column (3), which produces an oxygen-rich liquid and a nitrogen-rich vapour. Another part (12) of the incoming air is expanded through a turbine (13) and cooled in a heat exchanger (14) before it enters a low pressure column (4), which produces fluids respectively rich in O and N. The heat exchanger is cooled by liquid (15) drawn from a condenser associated with the columns. Also claimed is the distillation apparatus comprising medium and low pressure columns (3,4), turbine (13), heat exchanger (14) and the necessary connecting ducts to carry out the process.

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• [AD] EP 0153673 A2 19850904 - AIR PROD & CHEM [US]  
• [AD] EP 0556516 A2 19930825 - AIR PROD & CHEM [US]  
• [A] FR 1289009 A 19620330 - BRITISH OXYGEN CO LTD  
• [A] DE 3643359 A1 19880623 - LINDE AG [DE]  
• [A] GB 1271419 A 19720419 - BLIGH BERNARD RAMSEY

Cited by  
EP3757493A1

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**EP 0884543 A1 19981216**; AU 7005498 A 19981217; AU 730328 B2 20010301; CA 2240379 A1 19981213; FR 2764681 A1 19981218; FR 2764681 B1 19990716; JP H1183310 A 19990326; US 6047562 A 20000411

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