

Title (en)

Process and apparatus for air separation by cryogenic distillation

Title (de)

Verfahren und Vorrichtung zur Luftzerlegung durch Tieftemperaturdestillation

Title (fr)

Procédé et installation de séparation d'air par distillation cryogénique

Publication

**EP 1189003 B1 20050126 (FR)**

Application

**EP 01402310 A 20010906**

Priority

FR 0011932 A 20000919

Abstract (en)

[origin: EP1189003A1] The plant, comprising a high-pressure column (101), an intermediate pressure column (102) with a boiler (24), and a low pressure column (103), has no means for argon enrichment of a fluid containing between 3 and 20 per cent/mol of argon other than the three aforementioned columns. During operation a mixture of at least oxygen, nitrogen and argon is fed into the high-pressure column, where it is separated into oxygen-rich and nitrogen-rich fractions. Part of both fractions is fed to the low-pressure column, which operates at preferably above 4 bars, and the gas from the lower part of this column is sent to the boiler in the intermediate column and at least partially condensed before being returned to the low-pressure column. Oxygen-rich and nitrogen-rich fluids (31, 72) are then drawn from the low-pressure column; at least part of the nitrogen-rich fluid is at least partly condensed in a vaporizer/condenser linked to the low-pressure column, and at least part of the partly condensed fluid is fed back to the high-pressure column, but no fluid containing 3-20 per cent/mol of argon is enriched with argon in any column apart from the high-pressure, low-pressure or intermediate-pressure columns. An Independent claim is also included for the instillation for the cryogenic air separating procedure.

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**F25J 3/04**

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