

Title (en)

Single column process and device for cryogenic air separation

Title (de)

Einzelsäulenverfahren und -vorrichtung zur Tieftemperaturzerlegung von Luft

Title (fr)

Procedé et installation de séparation des gaz de l'air à une seule colonne

Publication

**EP 1050728 B1 20050615 (DE)**

Application

**EP 00108864 A 20000426**

Priority

DE 19919933 A 19990430

Abstract (en)

[origin: EP1050728A1] Gas generation single-column fractionated distillation of air operates at lower pressure, reducing energy requirement without sacrifice of process yield. A single-column process and assembly produces gases by the cryogenic fractionated distillation of air. The compressed incoming air feed (101, 102, 103, 110) is first cooled (104) and fed (105, 114) to the column (107). An oxygen-rich liquid fraction (116) drawn from the column (107) and expanded (117) and fed to a condenser-evaporator (118). The oxygen is evaporated (118) by an indirect exchange of heat from condensed nitrogen (120) drawn from the upper section of the column (107). A portion (131) of the vapor (129, 130) generated by the condenser-evaporator (118) is compressed and fed (134, 135) to the column (118). A portion (10, 110, 11) of the air feed (101) is released into the column (107) upstream of the inlet (114), where it decompresses to release energy.

IPC 1-7

**F25J 3/04**

IPC 8 full level

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CPC (source: EP)

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