

Title (en)

Process and apparatus for the production of nitrogen and oxygen

Title (de)

Verfahren und Vorrichtung zur Erzeugung von Sauerstoff und Stickstoff

Title (fr)

Procédé et dispositif de production d'oxygène et d'azote

Publication

**EP 1209431 B1 20040609 (DE)**

Application

**EP 01127958 A 20011123**

Priority

DE 10058332 A 20001124

Abstract (en)

[origin: EP1209431A1] Oxygen and nitrogen are produced by using a low temperature air decomposition process in a rectification system having a high pressure column (4) and a low pressure column (5). Process air (1, 3) is fed into the high pressure column, an oxygen-containing liquid fraction (8, 10) is removed from the high pressure column and injected into the low pressure column, and gaseous nitrogen (17) from the low pressure column is partially condensed by indirect heat exchange with a vaporizing coolant. A nitrogen product stream (19) is removed from the high pressure column and the low pressure column and an oxygen product stream (61, 62, 63) is removed as liquid and gas from the low pressure column. The coolant for the head condenser (7) of the low pressure column is formed by an intermediate liquid (15) removed from an intermediate site of the low pressure column. An Independent claim is also included for a device for the low temperature air decomposition. Preferred Features: The intermediate liquid is removed from an intermediate site which lies above the site at which the oxygen-containing liquid fraction from the high pressure column is injected into the low pressure column. Liquid nitrogen is removed from the low pressure column or its head condenser as a liquid nitrogen product.

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