

Title (en)

Process and installation for the production of gaseous oxygen under high pressure

Title (de)

Verfahren und Einrichtung zur Herstellung von gasförmigem Sauerstoff unter hohe Druck

Title (fr)

Procédé et installation de production d'oxygène gazeux sous haute pression

Publication

EP 0789208 A1 19970813 (FR)

Application

EP 97400222 A 19970131

Priority

FR 9601698 A 19960212

Abstract (en)

A process for producing a gas at a high pressure of at least 30 bars, using an air distillation unit (1) comprising a low pressure column (11) and a medium pressure column (10) where fractions of the air are delivered to the columns at different pressures after cooling, comprises dividing the air to be distilled into three streams: (i) a first medium pressure stream cooled to its dew point and delivered in the medium pressure column; (ii) a high pressure stream above at least 60 bars, being cooled and liquified (in 17), and after expansion (in 18), delivered in the double column (1); and (iii) an intermediate pressure stream, at least part of that stream being at an intermediate cooling temperature, expanded to medium pressure in a turbine (6) before being directed to the medium pressure column (10). The intermediate pressure is chosen such that the air is near its dew point before entering the turbine. Also claimed is apparatus for producing purified and pressurised gas.

Abstract (fr)

Ce procédé est du type dans lequel l'oxygène gazeux est directement produit sous la haute pression désirée par pompage d'oxygène liquide soutiré en cuve de la colonne basse pression (11). L'air à distiller est réparti en trois flux : un flux à la moyenne pression de la double colonne de distillation (1), un flux à une haute pression supérieure à 60 bars environ, et un flux à une pression intermédiaire qui, après refroidissement partiel, est détendu à la moyenne pression dans une turbine (8). La pression intermédiaire est choisie de manière que l'air turbiné se trouve au voisinage de son point de rosée à l'entrée de la roue de la turbine. Simultanément, du produit liquide est soutiré (en 24) de l'installation. Application aux installations produisant de grandes quantités d'oxygène gazeux sous une pression supérieure à 30 bars. <IMAGE>

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Citation (search report)

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