

Title (en)
Process and apparatus for the production of high pressure nitrogen and oxygen.

Title (de)
Verfahren und Apparat zur Herstellung von Hochdruck-Stickstoff und Sauerstoff.

Title (fr)
Procédé et installation de production d'azote sous haute pression et d'oxygène.

Publication
EP 0562893 A1 19930929

Application
EP 93400522 A 19930302

Priority
FR 9203501 A 19920324

Abstract (en)
According to this process, after the nitrogen originating from the low pressure column (11) is heated, it is compressed to the high pressure by means of a single nitrogen compressor (7) and the low-pressure column (11) is operated at a pressure of the order of $PN/\rho N$, where PN denotes the high pressure of nitrogen and ρN the compression ratio of the said nitrogen compressor. Application to the simultaneous production of, on the one hand, nitrogen of high purity at a pressure of between 50 and 60 bars and, on the other hand, oxygen at 65 bars, to feed a unit for producing ammonia. <IMAGE>

Abstract (fr)
Suivant ce procédé, après réchauffement de l'azote issu de la colonne basse pression (11), on le comprime à la haute pression au moyen d'un unique compresseur d'azote (7), et l'on fait fonctionner la colonne basse pression (11) sous une pression de l'ordre de $PN/\rho N$, ou PN désigne la haute pression d'azote et ρN le taux de compression dudit compresseur d'azote. Application à la production simultanée d'une part d'azote à haute pureté sous une pression comprise entre 50 et 60 bars, et d'autre part d'oxygène sous 65 bars, pour alimenter une unité de production d'ammoniac. <IMAGE>

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Cited by
CN106489059A; EP0982554A1; EP1120616A3; EP0834712A3; EP3059536A1; CN108207113A; CN106662394A; RU2691210C2; US6247333B1; US6871513B2; WO2016131545A1; WO03016676A1; US7100692B2; WO2016005031A1

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