

Title (en)  
METHOD AND PLANT FOR PROVIDING A PRESSURIZED OXYGEN-RICH, GASEOUS AIR PRODUCT

Title (de)  
VERFAHREN UND ANLAGE ZUR BEREITSTELLUNG EINES DRUCKBEAUFSCHLAGTEN SAUERSTOFFREICHEN, GASFÖRMIGEN LUFTPRODUKTS

Title (fr)  
PROCÉDÉ ET INSTALLATION PERMETTANT DE FOURNIR UN PRODUIT À BASE D'AIR GAZEUX SOUS PRESSION RICHE EN OXYGÈNE

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Abstract (en)  
[origin: WO2022263013A1] The invention relates to a high-atmospheric-pressure method for producing a pressurized, oxygen-rich, gaseous air product. A first partial quantity of the feed air quantity is supplied at a temperature in a first temperature range to a first turbine unit (5), decompressed using same, and fed into a high-pressure column (111). A second partial quantity of the feed air quantity is supplied at a temperature in a second temperature range to a second turbine unit (6), decompressed using same, and fed into a low-pressure column (12). The pressurized, oxygen-rich air product is provided as an internal compression product at 16 to 50 bar, wherein evaporation is effected proceeding from a temperature in a third temperature range. The third temperature range lies above the first and second temperature range, the second temperature range is selected such that a two-phase mixture with a liquid proportion of 5 to 15% forms at the outlet of the second turbine unit (6), the temperature in the first temperature range and the temperature in the second differ from each other by not more than 10 K, and a portion of less than 5% of all air products removed from the air separation plant (100) is removed from the air separation plant in an unevaporated and liquid state. The first turbine unit is braked by a cold compressor (4), the second by a generator (G) or a warm booster. The invention also relates to an air separation plant (100).

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