

Title (en)

CRYOGENIC DISTILLATION METHOD FOR AIR SEPARATION AND INSTALLATION USED TO IMPLEMENT SAME

Title (de)

KRYOGENES DESTILLATIONSVERFAHREN ZUR LUFTTRENNUNG UND ZUR DURCHFÜHRUNG DESSELBEN VERWENDETE ANLAGE

Title (fr)

PROCEDE DE SEPARATION D AIR PAR DISTILLATION CRYOGENIQUE ET UNE INSTALLATION POUR LA MISE EN OEUVRE DE CE PROCEDE

Publication

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Application

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Abstract (en)

[origin: WO2005085728A1] The invention relates to a cryogenic distillation method for air separation using an apparatus comprising a medium-pressure column (9) and a low-pressure column (11) which are thermally connected to one another. The inventive method comprises the following steps consisting in: cooling a quantity of compressed, purified air V to a cryogenic temperature in an exchanger (10) and conveying at least part thereof to the medium-pressure column; conveying oxygen- and nitrogen-enriched flows (LR, LP) from the medium-pressure column to the low-pressure column; and drawing nitrogen- and oxygen-enriched flows (35, 23) from the low-pressure column. According to the invention, the medium-pressure column operates at between 6 and 9 bar abs and the ratio between the total quantity of air V entering the exchanger and the total volume of the exchanger is greater than $3,000 \text{ Nm}^3/\text{h}/\text{m}^3$ and is preferably between 3,000 and $12,000 \text{ Nm}^3/\text{h}/\text{m}^3$. Moreover, the ratio between the flow of oxygen exiting the exchanger and the flow area reserved for said oxygen flow is less than $30 \text{ Nm}^3/\text{h}/\text{cm}^2$.

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