

Title (en)

Cryogenic air separation process and apparatus.

Title (de)

Verfahren und Vorrichtung zur Tieftemperaturzerlegung von Luft.

Title (fr)

Procédé et dispositif pour la séparation cryogénique d'air.

Publication

EP 0418139 B1 19931118 (EN)

Application

EP 90402488 A 19900911

Priority

US 8903926 W 19890912

Abstract (en)

[origin: EP0418139A1] An energy efficient process and apparatus for the cryogenic separation of air by rectification to produce at least one vapor fraction, at least one liquid fraction, and at least one nitrogen product stream wherein cooled and pressurized feed air in vapor form is condensed by indirect heat exchange contact with at least one liquid fraction to vaporize the liquid fraction and condense the feed air stream, then vaporizing the condensed feed air stream by indirect heat exchange contact with at least one vapor fraction thereby condensing the vapor fraction, and then using the vaporized feed air stream as feed air for cryogenic separation by rectification.

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IPC 8 full level

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Cited by

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CN 1050260 A 19910327; DE 69004647 D1 19931223; DE 69004647 T2 19940310; ES 2046740 T3 19940201; JP H03170785 A 19910724;
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ES 90402488 T 19900911; JP 24104090 A 19900911; SU 4830924 A 19900911; US 8903926 W 19890912; ZA 907188 A 19900910