

Title (en)

Device for evaporating a liquid by heat exchange with a second fluid and air distillation unit comprising such a device.

Title (de)

Apparat zum Verdampfen einer Flüssigkeit durch Wärmeaustausch mit einem zweiten Fluid und Luftdestillationsanlage mit einem solchen Apparat.

Title (fr)

Dispositif pour vaporiser un liquide par échange de chaleur avec un deuxième fluide et installation de distillation d'air comprenant un tel dispositif.

Publication

**EP 0130122 A1 19850102 (FR)**

Application

**EP 84401284 A 19840621**

Priority

FR 8310472 A 19830624

Abstract (en)

[origin: ES8600489A1] Liquid oxygen of a low pressure column forms a bath 5 at the top of a heat exchanger 2 of the type having plates defining vertical passages 17, 18. This liquid is predistributed along every other passage 17 by a series of apertures 27 formed for example in the plates, and then is uniformly distributed in a fine manner in the same passages by a packing 24 so as to form a continuous running liquid film. The gaseous nitrogen of a medium pressure column is introduced into the remaining passages 18 and condensed by heat exchange with the oxygen which is vaporized.

Abstract (fr)

L'oxygène liquide de la colonne basse pression forme un bain (5) au sommet d'un échangeur (2) du type à plaques à passages verticaux (17, 18). Ce liquide est pré-distribué le long d'un passage (17) sur deux au moyen d'une série de trous (27) ménagés par exemple dans les plaques, puis est uniformément distribué de façon fine dans les mêmes passages par un garnissage (24), de façon à former un film liquide ruisselant continu. L'azote gazeux de la colonne moyenne pression est introduit dans les passages (18) restants et est condensé par échange de chaleur avec l'oxygène, qui est vaporisé.

IPC 1-7

**F25J 3/00**; **F25J 3/04**; **F28F 27/02**

IPC 8 full level

**F22B 1/02** (2006.01); **F22B 3/02** (2006.01); **F25J 3/00** (2006.01); **F25J 3/04** (2006.01); **F28D 9/00** (2006.01); **F28F 3/06** (2006.01); **F28F 27/02** (2006.01)

CPC (source: EP KR US)

**F25J 3/00** (2013.01 - KR); **F25J 5/005** (2013.01 - EP US); **F28D 9/0068** (2013.01 - EP US); **F28D 21/00** (2013.01 - KR); **F28F 9/026** (2013.01 - EP US); **F25J 2250/04** (2013.01 - EP US); **F25J 2290/32** (2013.01 - EP US); **F28D 2021/0033** (2013.01 - EP US); **Y10S 62/903** (2013.01 - EP US)

Citation (search report)

- [A] FR 2008887 A1 19700130 - KOBÉ STEEL LTD
- [A] FR 2017807 A1 19700522 - KOBÉ STEEL LTD
- [A] FR 2003749 A1 19691114 - DEGGENDOR WERFT EISENBAU
- [A] FR 2154352 A1 19730511 - AIR LIQUIDE
- [AD] FR 2431103 A1 19800208 - AIR LIQUIDE [FR]

Cited by

FR2786858A1; EP0699884A1; WO2016166473A1; WO2016124748A1; FR2665755A1; EP3653983A1; EP1008826A1; EP0303492A3; US5014773A; FR2774755A1; EP0695921A1; EP0501471A3; EP2508830A1; FR3035202A1; CN107660265A; EP0566435A1; FR2690231A1; US5321954A; EP0546947A1; FR2685071A1; US5333683A; CN102792116A; FR2957142A1; CN102792117A; CN105066745A; FR3032521A1; CN107208986A; US6189338B1; WO2011110772A3; EP3462119B1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

**EP 0130122 A1 19850102**; **EP 0130122 B1 19880914**; **EP 0130122 B2 19940406**; AT E37229 T1 19880915; AU 2956384 A 19850131; AU 566656 B2 19871029; BR 8403038 A 19850528; CA 1245627 A 19881129; DE 3474059 D1 19881020; ES 533634 A0 19850916; ES 8600489 A1 19850916; FR 2547898 A1 19841228; FR 2547898 B1 19851129; IN 160739 B 19870801; JP H0531042 B2 19930511; JP S6017601 A 19850129; KR 850000658 A 19850228; PT 78780 A 19840701; US 4599097 A 19860708; ZA 844598 B 19850227

DOCDB simple family (application)

**EP 84401284 A 19840621**; AT 84401284 T 19840621; AU 2956384 A 19840620; BR 8403038 A 19840620; CA 457478 A 19840626; DE 3474059 T 19840621; ES 533634 A 19840622; FR 8310472 A 19830624; IN 510DE1984 A 19840625; JP 12213584 A 19840615; KR 840003573 A 19840623; PT 7878084 A 19840622; US 62007884 A 19840612; ZA 844598 A 19840618