

Title (en)
Falling film vaporizer and air distillation plant

Title (de)
Fallstrom-Verdampfer und Luftzerlegungsvorrichtung

Title (fr)
Vaporiseur à film ruisselant et installations de distillation d'air correspondantes

Publication
EP 1008826 B1 20040421 (FR)

Application
EP 99403043 A 19991206

Priority
FR 9815421 A 19981207

Abstract (en)
[origin: EP1008826A1] Each first main passage (G) for liquid to be vaporized, is seen in cross section transverse to the direction of liquid circulation. Each has a region of free discharge of sufficient extent to avoid impurity deposits, hence preventing blockage. Where principal passages are delimited by vertical plates (4), contours are substantially similar, parallel and spaced from each other to form flat main passages. The first main passages (L) are straighter than the second main passages (G) and contain neither wavy, heat exchange sections, nor auxiliary passages. One or more auxiliary closed passages (23) extend over the entire heat exchanger dimension parallel to the direction of liquid flow and walls of auxiliary passages contact the plates (4) defining the main passage. Preferred Features: The discharge region extends along a curve of length 10-30 cm. It extends fully transversely across the heat exchanger body. The exchanger comprises a parallel plate (4) assembly between which several first (L) and second main passages (G) are situated in alternation. The first main passage does not include wavy crosspieces between the two parallel plates where it is situated. Each first principal passage is delimited by two parallel plates defining an empty space between themselves, continued over their transverse width. The first main passage contains at least one wavy section forming thermal transfer fins.

IPC 1-7
F28D 9/00; **F25J 3/00**; **F28F 19/00**; **F28D 3/02**

IPC 8 full level
F25J 3/00 (2006.01); **F25J 3/04** (2006.01); **F28D 3/00** (2006.01); **F28D 3/02** (2006.01); **F28F 3/02** (2006.01)

CPC (source: EP US)
F25J 5/005 (2013.01 - EP US); **F28D 3/00** (2013.01 - EP US); **F28D 3/02** (2013.01 - EP US); **F28F 3/02** (2013.01 - EP US);
F28F 3/025 (2013.01 - EP US); **F25J 2250/04** (2013.01 - EP US); **F25J 2290/44** (2013.01 - EP US); **Y10S 62/903** (2013.01 - EP US)

Cited by
EP1262725A3; CN102305561A; EP1067347A4; WO2011110782A1; WO2011084512A1; US8734569B2; US9452385B1; WO2011084516A1; US8663364B2; US9452386B1; WO2012048078A1; US8911535B2; WO2011084508A2; EP3395428A2

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 1008826 A1 20000614; **EP 1008826 B1 20040421**; DE 69916562 D1 20040527; DE 69916562 T2 20050512; FR 2786858 A1 20000609; FR 2786858 B1 20010119; US 6695043 B1 20040224

DOCDB simple family (application)
EP 99403043 A 19991206; DE 69916562 T 19991206; FR 9815421 A 19981207; US 45590099 A 19991207