

Title (en)
HEAT EXCHANGER

Title (de)
WÄRMEÜBERTRAGER

Title (fr)
ECHANGEUR THERMIQUE

Publication
EP 1570223 A1 20050907 (DE)

Application
EP 03788989 A 20031031

Priority
• DE 10256869 A 20021204
• EP 0312138 W 20031031

Abstract (en)
[origin: US7156164B2] The invention relates to a heat exchanger (10) with tubes (80) and a collector box (20). Said collector box (20) has a tube-plate (30) with tube openings (60) and with angled or rounded lateral regions (110,120).

IPC 1-7
F28F 9/02

IPC 8 full level
F28F 9/02 (2006.01)

CPC (source: EP US)
F28F 9/0224 (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

Designated extension state (EPC)
AL LT LV MK

DOCDB simple family (publication)
WO 2004051175 A1 20040617; WO 2004051175 A8 20040819; AT E364827 T1 20070715; AU 2003293643 A1 20040623; BR 0307932 A 20041221; CN 100390492 C 20080528; CN 1720423 A 20060111; DE 10256869 A1 20040624; DE 50307492 D1 20070726; EP 1570223 A1 20050907; EP 1570223 B1 20070613; JP 2006509177 A 20060316; US 2005252648 A1 20051117; US 7156164 B2 20070102

DOCDB simple family (application)
EP 0312138 W 20031031; AT 03788989 T 20031031; AU 2003293643 A 20031031; BR 0307932 A 20031031; CN 200380105129 A 20031031; DE 10256869 A 20021204; DE 50307492 T 20031031; EP 03788989 A 20031031; JP 2004556098 A 20031031; US 52070305 A 20050110