

Title (en)

HEAT EXCHANGER AND SANITARY CLEANING DEVICE WITH SAME

Title (de)

WÄRMETAUSCHER UND SANITÄRREINIGUNGSVORRICHTUNG DAMIT

Title (fr)

ÉCHANGEUR DE CHALEUR ET DISPOSITIF DE NETTOYAGE SANITAIRE DOTÉ DE CE DERNIER

Publication

EP 2784407 A4 20150225 (EN)

Application

EP 12886907 A 20121217

Priority

JP 2012008053 W 20121217

Abstract (en)

[origin: EP2784407A1] A heat exchanger (28) includes a planar heater (34) and a casing (38). A heater housing space (48) includes a flow passage space (74). The casing has an inflow port (70), an outflow port (72), an inflow passage (50), a communication passage (52), first ribs (76), and a second rib (53). The first ribs project from main surfaces (48a) toward heat transfer surface (36) in the flow passage space and are extended between two side surfaces (48b). The second rib is extended in the communication passage in a direction orthogonal to a direction in which a lower end of the planar heater extends.

IPC 8 full level

F24H 1/10 (2006.01); **E03D 9/08** (2006.01); **F24D 19/00** (2006.01); **F24H 9/00** (2006.01); **H05B 3/78** (2006.01)

CPC (source: EP)

F24D 19/0092 (2013.01); **F24H 1/102** (2013.01); **F24H 9/0015** (2013.01); **H05B 3/24** (2013.01); **H05B 3/78** (2013.01); **E03D 9/08** (2013.01)

Citation (search report)

- [XY] EP 2476969 A1 20120718 - PANASONIC CORP [JP]
- [Y] WO 2012144122 A1 20121026 - PANASONIC CORP [JP], et al
- See references of WO 2014097346A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2784407 A1 20141001; **EP 2784407 A4 20150225**; **EP 2784407 B1 20220817**; CN 104011479 A 20140827; CN 104011479 B 20150513; JP 5460937 B1 20140402; JP WO2014097346 A1 20170112; WO 2014097346 A1 20140626

DOCDB simple family (application)

EP 12886907 A 20121217; CN 201280056799 A 20121217; JP 2012008053 W 20121217; JP 2013552748 A 20121217