

Title (en)

FREE-DRAINING FINNED SURFACE ARCHITECTURE FOR A HEAT EXCHANGER

Title (de)

GERIPpte OBERFLÄchenarchitektur mit freiem abfluss für einen wärmetauscher

Title (fr)

ARCHITECTURE À SURFACE À AILETTES AUTO-DRAINANTE POUR ÉCHANGEUR DE CHALEUR

Publication

**EP 2478318 A1 20120725 (EN)**

Application

**EP 10817599 A 20100331**

Priority

- US 24306409 P 20090916
- US 2010029416 W 20100331

Abstract (en)

[origin: WO2011034633A1] A free-draining heat exchanger includes a first heat exchange tube, a second heat exchange tube spaced from and generally parallel to the first heat exchange tube, and a fin contacting the first and second heat exchange tubes. The fin includes a louver and at least one drainage enhancement feature for promoting removal of liquid from external surfaces of the heat exchanger. A free-draining fin structure includes an array of fins disposed between adjacent heat exchange tubes for improving water drainage by reducing liquid surface tension. Each fin in the array includes an opening and a louver for directing airflow through the opening and around the fin and at least one drainage enhancement feature.

IPC 8 full level

**F28F 1/32** (2006.01); **F28D 1/053** (2006.01); **F28D 9/02** (2006.01); **F28F 1/12** (2006.01); **F28F 13/00** (2006.01); **F28F 17/00** (2006.01)

CPC (source: EP US)

**F28D 1/05391** (2013.01 - EP US); **F28F 1/128** (2013.01 - EP US); **F28F 17/005** (2013.01 - EP US); **F28F 2265/06** (2013.01 - EP US);  
**F28F 2265/22** (2013.01 - EP US)

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

**WO 2011034633 A1 20110324**; CN 102483313 A 20120530; EP 2478318 A1 20120725; EP 2478318 A4 20140528;  
IN 867DEN2012 A 20150710; SG 179189 A1 20120427; US 2012227945 A1 20120913

DOCDB simple family (application)

**US 2010029416 W 20100331**; CN 201080041400 A 20100331; EP 10817599 A 20100331; IN 867DEN2012 A 20120131;  
SG 2012018818 A 20100331; US 201013395742 A 20100331