

Title (en)

OIL-WATER HEAT EXCHANGER, IN PARTICULAR FOR THE INTERNAL COMBUSTION ENGINE OF A MOTOR VEHICLE

Title (de)

ÖL-WASSER-WÄRMETAUSCHER, INSBESONDERE FÜR DEN VERBRENNUNGSMOTOR EINES KRAFTFAHRZEUGES

Title (fr)

ÉCHANGEUR DE CHALEUR HUILE-EAU, EN PARTICULIER POUR MOTEUR À COMBUSTION INTERNE D'UN VÉHICULE AUTOMOBILE

Publication

**EP 3417210 A1 20181226 (DE)**

Application

**EP 17705097 A 20170213**

Priority

- DE 102016102890 A 20160218
- EP 2017053111 W 20170213

Abstract (en)

[origin: WO2017140606A1] The invention relates to an oil-water heat exchanger, in particular for connection to an internal combustion engine of a motor vehicle, comprising at least one electric heating coating (13) which is applied to an outer side and/or in the interior of the heat exchanger.

IPC 8 full level

**F24H 1/12** (2006.01); **F28D 9/00** (2006.01); **H05B 3/22** (2006.01)

CPC (source: EP KR US)

**C23C 4/01** (2016.01 - US); **F01P 3/00** (2013.01 - US); **F24H 1/121** (2013.01 - EP KR); **F24H 9/1818** (2013.01 - EP KR); **F28D 9/00** (2013.01 - EP KR); **H05B 3/12** (2013.01 - EP KR); **H05B 3/262** (2013.01 - US); **F01P 2003/008** (2013.01 - US); **F24H 2250/02** (2013.01 - EP KR); **F28D 2021/0077** (2013.01 - EP KR); **F28D 2021/0089** (2013.01 - EP KR); **F28F 13/12** (2013.01 - US); **H05B 2203/013** (2013.01 - EP KR US); **H05B 2203/017** (2013.01 - US)

Citation (search report)

See references of WO 2017140606A1

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)

**WO 2017140606 A1 20170824**; CN 108700333 A 20181023; DE 102016102890 A1 20170824; EP 3417210 A1 20181226; EP 3417210 B1 20230816; JP 2019512060 A 20190509; JP 6925354 B2 20210825; KR 20180112835 A 20181012; KR 20200058609 A 20200527; US 2021219388 A1 20210715

DOCDB simple family (application)

**EP 2017053111 W 20170213**; CN 201780011986 A 20170213; DE 102016102890 A 20160218; EP 17705097 A 20170213; JP 2018542162 A 20170213; KR 20187026345 A 20170213; KR 20207014596 A 20170213; US 201715999667 A 20170213