

Title (en)

Exhaust gas cooler

Title (de)

Abgaskühler

Title (fr)

Refroidisseur pour gaz d'échappement

Publication

EP 2199722 A3 20100825 (DE)

Application

EP 09177831 A 20091203

Priority

DE 102008064090 A 20081219

Abstract (en)

[origin: EP2199722A2] The cooler has an exhaust gas inlet and an exhaust gas outlet communicatively connected with inlet and outlet chambers, respectively. Exhaust gas tubes (7) are designed as flat tubes, extend parallel to each other through a coolant chamber and are communicatively connected with the inlet and outlet chambers. A coolant inlet and a coolant outlet are communicatively connected with the coolant chamber. The tubes have bulges (29) lying at a distance to each other in a longitudinal direction (30) of the tubes, where the cooler is completely made of stainless steel.

IPC 8 full level

F28D 7/16 (2006.01); **F02M 25/07** (2006.01); **F28F 1/42** (2006.01); **F28F 3/04** (2006.01)

CPC (source: EP US)

F28D 7/1684 (2013.01 - EP US); **F28F 1/42** (2013.01 - EP US); **F28F 1/426** (2013.01 - EP US); **F28F 3/042** (2013.01 - EP US); **F28F 3/046** (2013.01 - EP US); **F28D 21/0003** (2013.01 - EP US); **F28F 9/02** (2013.01 - EP US); **F28F 2001/027** (2013.01 - EP US)

Citation (search report)

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- [XP] EP 2071263 A1 20090617 - SMK SYSTEME METALL KUNSTSTOFF [DE]
- [Y] US 2006048759 A1 20060309 - HENDRIX DANIEL [DE], et al
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- [X] US 2003000687 A1 20030102 - MATHUR ACHINT P [US], et al

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CN107192283A; US8627880B2; WO2014048688A1; WO2012079701A1; US10520261B2

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

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2199722 A2 20100623; **EP 2199722 A3 20100825**; **EP 2199722 B1 20120801**; DE 102008064090 A1 20100812; JP 2010144723 A 20100701; JP 5579428 B2 20140827; US 2010162699 A1 20100701; US 8627880 B2 20140114

DOCDB simple family (application)

EP 09177831 A 20091203; DE 102008064090 A 20081219; JP 2009283690 A 20091215; US 64206809 A 20091218