

Title (en)

Heat exchanger for an EGR system with an integrated by-pass duct.

Title (de)

Wärmeaustauscher für ein EGR System mit integrierter Bypassleitung

Title (fr)

Echangeur de chaleur pour un système EGR avec un conduit de dérivation intégré

Publication

EP 1367253 A1 20031203 (EN)

Application

EP 03380127 A 20030528

Priority

ES 200201218 A 20020528

Abstract (en)

A heat exchanger (1) for an EGR system with an integrated by-pass duct (9). A heat exchanger for recirculated exhaust gases of an internal combustion engine is proposed with an integrated by-pass duct (9) through which the exhaust gases can recirculate during the engine starting and/or in low temperature or load conditions. <??>The exchanger is formed by a cylindrical casing (2) inside of which the typical refrigeration chamber (3) in this type of devices is assembled, as well as the by-pass duct (9) . As a coupling means to the gas intake device of the EGR system, a flange (15,16) is used with a housing for the refrigerating tubes of the refrigeration chamber and another housing (22) for the by-pass duct; with a separation area (23) between said housings. <??>The by-pass duct can be a double-walled duct with an intermediate air chamber to prevent the cooling of the gases circulating through it. <IMAGE>

IPC 1-7

F02M 25/07; **F28F 27/02**

IPC 8 full level

F02M 25/07 (2006.01); **F28D 7/16** (2006.01); **F28F 27/02** (2006.01)

CPC (source: EP ES)

F02M 26/25 (2016.02 - EP); **F28D 7/163** (2013.01 - EP ES); **F28F 9/0278** (2013.01 - EP); **F02M 26/32** (2016.02 - EP); **F28D 21/0003** (2013.01 - EP)

Citation (applicant)

- US 4147141 A 19790403 - NAGANO TETSURO
- US 5203311 A 19930420 - HITOMI MITSUO [US], et al
- US 5617726 A 19970408 - SHERIDAN TODD A [US], et al
- WO 0210574 A1 20020207 - SERCK HEAT TRANSFER LTD [GB], et al

Citation (search report)

- [X] DE 914450 C 19540701 - HANS WINDHOFF APP UND MASCHINE
- [X] DE 4430648 A1 19960307 - FLUCORREX AG FLAWIL [CH]
- [X] EP 0356648 A1 19900307 - BORSIG GMBH [DE]
- [X] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 13 5 February 2001 (2001-02-05)

Cited by

JP2015025604A; DE102005040612A1; EP2743488A1; CN104500282A; ES2321783A1; EP2295921A3; ES2322728A1; EP2944913A1; US2015330712A1; CN105089860A; EP2025913A1; US7721792B2; DE102012019254A1; US9169756B2; WO2008003486A1; WO2014090792A1; WO2012143462A3; WO2007060172A1; WO2005111385A3; US7931013B2; US8118082B2; US8464778B2; US9803544B2; EP2295921B1

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

DOCDB simple family (publication)

EP 1367253 A1 20031203; **EP 1367253 B1 20060712**; **EP 1367253 B2 20100616**; AT E333046 T1 20060815; DE 60306717 D1 20060824; DE 60306717 T2 20070802; DE 60306717 T3 20110105; ES 2209618 A1 20040616; ES 2209618 B1 20050816; ES 2268306 T3 20070316; ES 2268306 T5 20101027

DOCDB simple family (application)

EP 03380127 A 20030528; AT 03380127 T 20030528; DE 60306717 T 20030528; ES 03380127 T 20030528; ES 200201218 A 20020528