

Title (en)

HEAT RECOVERY DEVICE AND OPERATING METHOD

Title (de)

WÄRMENUTZUNGSVORRICHTUNG UND BETRIEBSVERFAHREN

Title (fr)

DISPOSITIF D'EXPLOITATION DE CHALEUR ET PROCÉDÉ DE FONCTIONNEMENT

Publication

EP 2425101 A2 20120307 (DE)

Application

EP 10710225 A 20100318

Priority

- EP 2010001720 W 20100318
- DE 102009041550 A 20090915
- DE 102009019385 A 20090429

Abstract (en)

[origin: WO2010124765A2] The invention relates to a method for operating a heat recovery device (1), particularly of a motor vehicle, wherein the heat recovery device (1) comprises a working fluid that is condensed by a condenser (5) of the heat recovery device (1) after expanding in an expansion machine (3) of the heat recovery device (1). By opening an inflow cross-section of a working fluid of the exhaust heat recovery device (1) to an expansion machine (3) of the heat recovery device (1), it is possible to increase a heat transfer flow (dQ) from the working fluid to the condenser environment, and to thus ensure the complete condensation of the working fluid in the condenser (5), by immediately increasing a low pressure (pU , pU^*) of the working fluid in the region of the condenser (5) and thereby inducing an immediate increase in the condensation temperature (TU , TU^*) of the working fluid in the region of the condenser.

IPC 8 full level

F01K 9/00 (2006.01); **F01K 13/02** (2006.01); **F01K 15/02** (2006.01); **F01K 23/06** (2006.01)

CPC (source: EP US)

F01K 9/00 (2013.01 - EP US); **F01K 13/02** (2013.01 - EP US); **F01K 15/02** (2013.01 - EP US); **F01K 23/065** (2013.01 - EP US);
F02G 5/02 (2013.01 - EP US); **Y02T 10/12** (2013.01 - EP US)

Citation (search report)

See references of WO 2010124765A2

Citation (examination)

WO 2009080154 A2 20090702 - DAIMLER AG [DE], et al

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)

DE 102009041550 A1 20101104; CN 102414400 A 20120411; EP 2425101 A2 20120307; JP 2012525528 A 20121022;
US 2012096857 A1 20120426; WO 2010124765 A2 20101104; WO 2010124765 A3 20111013

DOCDB simple family (application)

DE 102009041550 A 20090915; CN 201080018833 A 20100318; EP 10710225 A 20100318; EP 2010001720 W 20100318;
JP 2012507616 A 20100318; US 201113317836 A 20111028