

Title (en)
Rankine cycle system

Title (de)
Rankine-Zyklussystem

Title (fr)
Système de cycle de Rankine

Publication
EP 2436888 A1 20120404 (EN)

Application
EP 11182464 A 20110923

Priority
JP 2010213459 A 20100924

Abstract (en)
A Rankine cycle system (101) mounted on a vehicle has a Rankine cycle circuit (100) through which working fluid circulates, a power generator, a power storage and a controller. The Rankine cycle circuit includes a fluid expansion device (114), a fluid transferring device (111), first and second passages (1,2), a heater (112,113), a cooling device (115), a bypass passage (3) and a flow regulating valve (120). The bypass passage connects the first passage to the second passage. The flow regulating valve is provided in the bypass passage for opening and closing the bypass passage. The power generator (116) converts the work generated by the fluid expansion device into electric power. The controller (119) monitors charge rate of the electric power charged in the power storage and controls an operation of the flow regulating valve based on the monitored charge rate. The controller causes the flow regulating valve to be opened when the monitored charge rate is greater than a predetermined value.

IPC 8 full level
F01K 13/02 (2006.01); **F01K 23/06** (2006.01); **F01K 23/10** (2006.01); **F01K 25/08** (2006.01); **F02G 5/00** (2006.01); **F02G 5/02** (2006.01)

CPC (source: EP KR US)
F01K 13/02 (2013.01 - EP US); **F01K 15/02** (2013.01 - KR); **F01K 23/06** (2013.01 - KR); **F01K 23/065** (2013.01 - EP US); **F01K 23/101** (2013.01 - EP US); **F01K 25/02** (2013.01 - KR); **F01K 25/08** (2013.01 - EP US); **F02G 5/02** (2013.01 - KR)

Citation (applicant)
JP 2009274513 A 20091126 - CALSONIC KANSEI CORP

Citation (search report)
• [XY] JP 2008208823 A 20080911 - SANDEN CORP
• [XA] JP 2009097387 A 20090507 - DENSO CORP, et al
• [YA] US 2009000299 A1 20090101 - AST GABOR [DE], et al
• [A] US 2006112692 A1 20060601 - SUNDEL TIMOTHY N [US]
• [A] DE 10345580 A1 20050421 - ENGION AG [DE]
• [A] WO 2006138459 A2 20061228 - UTC POWER LLC [US], et al
• [X] US 2009071156 A1 20090319 - NISHIKAWA MICHIO [JP], et al

Cited by
WO2019211540A1; EP2993317A1; EP2889457A1; FR3080892A1; US9964229B2; WO2014060760A3; WO2012085262A1; US9551240B2

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)
EP 2436888 A1 20120404; CN 102418623 A 20120418; JP 2012067683 A 20120405; KR 20120031464 A 20120403; US 2012073295 A1 20120329

DOCDB simple family (application)
EP 11182464 A 20110923; CN 201110291631 A 20110923; JP 2010213459 A 20100924; KR 20110096574 A 20110923; US 201113238287 A 20110921