Title (en)

METHOD FOR CONVERTING THERMAL POWER, DELIVERED FROM A VARIABLE TEMPERATURE HEAT SOURCE, INTO MECHANICAL POWER

Title (de)

VERFAHREN ZUR UMWANDLUNG VON WÄRMEENERGIE AUS EINER TEMPERATURVERÄNDERLICHEN WÄRMEQUELLE IN MECHANISCHE ENERGIE

Title (fr)

PROCÉDÉ DE CONVERSION D'ÉNERGIE THERMIQUE, FOURNIE À PARTIR D'UNE SOURCE DE CHALEUR À TEMPÉRATURE VARIABLE, EN ÉNERGIE MÉCANIQUE

Publication

EP 2638252 A1 20130918 (EN)

Application

EP 10805650 A 20101112

Priority

IT 2010000454 W 20101112

Abstract (en)

[origin: WO2012063275A1] The present invention concerns a method and a system for converting thermal power delivered from a variable temperature heat source into mechanical power by means of a closed thermodynamic cycle. The cycle is characterized in that it operates between a higher temperature (Thigh) and a temperature substantially equal to ambient temperature (Tamb), wherein said higher temperature (Thigh) is much higher than ambient temperature (Tamb), said closed thermodynamic cycle comprising an adiabatic compression process for changing the temperature of a two-phase mixture from said ambient temperature (Tamb) to a lower temperature (Tlow) and to change the specific entropy value of one phase of said two-phase mixture from a first specific entropy value (si, s3) to a second specific entropy value (s2), said second specific entropy value (s2) being lower than said first specific entropy value (s1, s3) and said ambient temperature value (Tamb) being lower than the value of said lower temperature (Tlow).

IPC 8 full level

F01K 21/00 (2006.01); **F01K 21/04** (2006.01); **F01K 23/10** (2006.01); **F01K 25/06** (2006.01)

CPC (source: EP US)

F01K 21/005 (2013.01 - EP US); **F01K 23/10** (2013.01 - EP US); **F01K 25/06** (2013.01 - US); **F01K 25/065** (2013.01 - EP US)

Citation (search report)

See references of WO 2012063275A1

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

DOCDB simple family (publication)

WO 2012063275 A1 20120518; EP 2638252 A1 20130918; EP 2638252 B1 20180815; US 2013227948 A1 20130905

DOCDB simple family (application)

IT 2010000454 W 20101112; EP 10805650 A 20101112; US 201013884405 A 20101112