

Title (en)
HEAT ENGINE

Title (de)
WÄRMEKRAFTMASCHINE

Title (fr)
MACHINE THERMIQUE

Publication
EP 4308801 A1 20240124 (FR)

Application
EP 22714863 A 20220315

Priority

- FR 2102659 A 20210317
- EP 2022056726 W 20220315

Abstract (en)
[origin: WO2022194878A1] The present invention relates to a heat engine comprising: a first heat source; a second heat source; a module (3') for alternately displacing the thermodynamic fluid between a cold portion (4) connected to the first heat source (1) and a hot portion (5) connected to the second heat source (2), said module (3') comprising a chamber able and intended to contain a thermodynamic fluid, the chamber being connected to a supply outlet of thermodynamic fluid (G), said module (3') further comprising a displacer capable of moving in said chamber alternately between the cold portion (4) and the hot portion (5); a first conversion unit (6) for converting a pressure difference of the thermodynamic fluid into mechanical energy, the conversion unit (6) comprising at least one circuit (7) that includes at least one motor (8) and is connected to the supply outlet of thermodynamic fluid (G); a first control unit placed in the first conversion unit (6) for controlling the phase of the thermodynamic cycle in said module (3'); a second control unit of said module (3') for controlling the displacement of said displacer alternately between the hot portion (5) and the cold portion (4).

IPC 8 full level
F01K 7/32 (2006.01); **F01K 25/08** (2006.01); **F01K 25/10** (2006.01); **F02G 1/044** (2006.01)

CPC (source: EP US)
F01K 7/32 (2013.01 - EP US); **F01K 25/08** (2013.01 - EP US); **F01K 25/103** (2013.01 - EP US); **F02G 1/044** (2013.01 - US)

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
FR 3120922 A1 20220923; CN 116964303 A 20231027; EP 4308801 A1 20240124; JP 2024511960 A 20240318; US 2024218812 A1 20240704;
WO 2022194878 A1 20220922; WO 2022194878 A9 20221117

DOCDB simple family (application)
FR 2102659 A 20210317; CN 202280020752 A 20220315; EP 2022056726 W 20220315; EP 22714863 A 20220315;
JP 2023555777 A 20220315; US 202218550218 A 20220315