

Title (en)  
PENDULAR ENGINE

Title (de)  
PENDELMOTOR

Title (fr)  
MOTEUR PENDULAIRE

Publication  
**EP 2235439 A2 20101006 (FR)**

Application  
**EP 09719323 A 20090108**

Priority  
• FR 2009000012 W 20090108  
• BE 200800013 A 20080109

Abstract (en)  
[origin: BE1017812A5] The engine has reversible thermal resources drawn from a single regulated heat supply, where the engine is operated by recirculation of gases in closed loops. The closed loops are provided between a thermodynamic pendulum and the heat supply. The pendulum has a cylindrical chamber (1) with a piston (2) connected to a free flywheel. The heat supply is positioned at certain distance away from the chamber, with extension to turbine engines using phase changes.

IPC 8 full level  
**F22B 3/04** (2006.01); **F01K 21/00** (2006.01); **F01K 25/00** (2006.01)

CPC (source: EP US)  
**F01K 7/16** (2013.01 - EP US); **F01K 13/00** (2013.01 - EP US); **F01K 21/005** (2013.01 - EP US); **F01K 25/00** (2013.01 - EP US);  
**F03G 7/00** (2013.01 - EP); **F03G 7/0254** (2021.08 - US); **F03G 7/10** (2013.01 - EP); **F03G 7/129** (2021.08 - US); **F22B 3/04** (2013.01 - EP US)

Citation (search report)  
See references of WO 2009112666A2

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 TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**BE 1017812 A5 20090707**; EP 2235439 A2 20101006; US 2011131987 A1 20110609; US 8408000 B2 20130402; WO 2009112666 A2 20090917;  
WO 2009112666 A3 20120202; WO 2009112666 A9 20091105

DOCDB simple family (application)  
**BE 200800013 A 20080109**; EP 09719323 A 20090108; FR 2009000012 W 20090108; US 80896209 A 20090108