

Title (en)

Method for operating a piston expander of a steam motor

Title (de)

Verfahren zum Betrieb eines Kolbenexpanders eines Dampfmotors

Title (fr)

Procédé de fonctionnement d'un piston à expansion d'un moteur à vapeur

Publication

EP 2354475 A3 20171115 (DE)

Application

EP 10015706 A 20101216

Priority

AT 1602010 A 20100205

Abstract (en)

[origin: EP2354475A2] The method involves conveying the live steam in the cylinder space through an inlet valve (4) and opening an outlet opening as soon as the piston (9) is placed in the bottom dead center. The outlet opening is closed before the piston reaches the top dead center in the exhaust stroke.

IPC 8 full level

F01K 7/00 (2006.01); **F01B 17/04** (2006.01); **F01K 7/36** (2006.01); **F01K 23/06** (2006.01)

CPC (source: EP US)

F01B 17/04 (2013.01 - EP US); **F01K 7/00** (2013.01 - EP US); **F01K 7/36** (2013.01 - EP US); **F01K 23/065** (2013.01 - EP US)

Citation (search report)

- [X] DE 102007049464 A1 20090423 - BURGHAEUSER JUN ARMIN [DE]
- [X] US 2009056331 A1 20090305 - ZHAO YUANPING [US], et al
- [X] US 1227836 A 19170529 - SCHMID KARL [DE]
- [X] DE 19847742 C1 20000113 - GAB GES FUER ARBEITS UND BERUF [DE]

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 2354475 A2 20110810; EP 2354475 A3 20171115; EP 2354475 B1 20230201; AT 509394 A1 20110815; AT 509394 B1 20120115; BR PI1100214 A2 20120724; BR PI1100214 B1 20200825; CN 102146808 A 20110810; CN 102146808 B 20170412; MX 2011001102 A 20110831; RU 2011104049 A 20120810; RU 2466278 C2 20121110; US 2011192162 A1 20110811; US 9038388 B2 20150526

DOCDB simple family (application)

EP 10015706 A 20101216; AT 1602010 A 20100205; BR PI1100214 A 20110207; CN 201110035659 A 20110201; MX 2011001102 A 20110128; RU 2011104049 A 20110204; US 201113020594 A 20110203