

Title (en)

DEVICE FOR THERMAL COMPRESSION OF A GASEOUS FLUID

Title (de)

VORRICHTUNG FÜR THERMISCHE KOMPRESSION EINES GASFÖRMIGEN FLUIDS

Title (fr)

DISPOSITIF DE COMPRESSION THERMIQUE DE FLUIDE GAZEUX

Publication

EP 3011161 A1 20160427 (FR)

Application

EP 14750525 A 20140616

Priority

- FR 1355745 A 20130618
- FR 2014051476 W 20140616

Abstract (en)

[origin: WO2014202885A1] The invention relates to a device for compressing a gaseous fluid, including a first chamber (21) thermally coupled with a hot source (6), a second chamber (22) thermally coupled with a cold source (5), a movable piston (7) moved by a rod (8), and a regenerating exchanger (9) establishing fluid communication between the first and second chambers, wherein the rod is arranged in a cylindrical socket (17) and guided in axial translation by a linear guiding system (3) such as to guide the piston without contact relative to the sleeve, wherein a sealing ring (18) attached to the cylindrical socket surrounds the rod with a very low radial clearance, in order to limit the passage of the gaseous fluid along the mobile rod. The invention also discloses an integral cold casing having machined boreholes, a thermal screen in the hot casing, and a self-driving system with a resilient return means.

IPC 8 full level

F02G 1/053 (2006.01)

CPC (source: EP RU US)

F02G 1/0535 (2013.01 - EP RU US); **F02G 1/057** (2013.01 - RU US); **F02G 2253/03** (2013.01 - EP US); **F02G 2253/80** (2013.01 - EP US); **F02G 2280/50** (2013.01 - EP US)

Citation (search report)

See references of WO 2014202885A1

Cited by

EP3117089B1

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)

FR 3007077 A1 20141219; FR 3007077 B1 20171222; CA 2916005 A1 20141224; CA 2916005 C 20210126; CN 105492751 A 20160413; CN 105492751 B 20180501; CN 108708840 A 20181026; CN 108708840 B 20200310; DK 3011161 T3 20201019; EP 3011161 A1 20160427; EP 3011161 B1 20200722; ES 2824205 T3 20210511; JP 2016528418 A 20160915; JP 2018141623 A 20180913; JP 6352409 B2 20180704; JP 6621872 B2 20191218; PL 3011161 T3 20210419; PT 3011161 T 20201022; RU 2016101316 A 20170721; RU 2018108835 A 20190226; RU 2018108835 A3 20210511; RU 2648180 C2 20180322; RU 2759462 C2 20211115; US 10054078 B2 20180821; US 10704493 B2 20200707; US 2016146152 A1 20160526; US 2018328312 A1 20181115; WO 2014202885 A1 20141224

DOCDB simple family (application)

FR 1355745 A 20130618; CA 2916005 A 20140616; CN 201480042675 A 20140616; CN 201810329685 A 20140616; DK 14750525 T 20140616; EP 14750525 A 20140616; ES 14750525 T 20140616; FR 2014051476 W 20140616; JP 2016520576 A 20140616; JP 2018105925 A 20180601; PL 14750525 T 20140616; PT 14750525 T 20140616; RU 2016101316 A 20140616; RU 2018108835 A 20140616; US 201414900100 A 20140616; US 201816038801 A 20180718