

Title (en)

DEVICE FOR IMPROVED HEAT TRANSFER WITHIN A COMPRESSION AND/OR EXPANSION SYSTEM

Title (de)

VORRICHTUNG FÜR VERBESSERTE WÄRMEÜBERTRAGUNG IN EINEM KOMPRESSIONS- UND/ODER DEKOMPRESSIONSSYSTEM

Title (fr)

DISPOSITIF POUR UN TRANSFERT DE CHALEUR AMÉLIORÉ DANS UN SYSTÈME DE COMPRESSION ET/OU DE DILATATION

Publication

EP 2820298 A1 20150107 (EN)

Application

EP 13706325 A 20130125

Priority

- US 201261590383 P 20120125
- US 201261590402 P 20120125
- US 2013023227 W 20130125

Abstract (en)

[origin: WO2013112892A1] A compression and expansion system includes a pressure vessel having a variable volume working chamber therein. The pressure vessel has a conduit through which at least one fluid can be introduced into and discharged from the working chamber. The system further includes a heat transfer element disposed within the working chamber and including a layer and at least one of a fin and a spacing element. The pressure vessel is operable to compress fluid introduced into the working chamber such that heat energy is transferred from the compressed fluid to the heat transfer element, and is further operable to expand fluid introduced into the working chamber such that heat energy is transferred from the heat transfer element to the expanded fluid.

IPC 8 full level

F04B 35/00 (2006.01); **F02C 6/16** (2006.01); **F03D 9/02** (2006.01); **F04B 39/06** (2006.01); **F04B 53/08** (2006.01); **F04F 1/02** (2006.01); **F15B 1/02** (2006.01); **F15B 1/24** (2006.01)

CPC (source: EP US)

F04B 35/00 (2013.01 - US); **F04B 35/008** (2013.01 - EP US); **F04B 39/06** (2013.01 - EP US); **F04B 53/08** (2013.01 - EP US); **F04F 1/02** (2013.01 - EP US); **F05D 2260/20** (2013.01 - EP US); **F15B 2201/31** (2013.01 - EP US); **F15B 2201/42** (2013.01 - EP US)

Citation (search report)

See references of WO 2013112892A1

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)

WO 2013112892 A1 20130801; AU 2013211910 A1 20140918; CA 2899172 A1 20130801; CN 104254691 A 20141231; EP 2820298 A1 20150107; US 2014369857 A1 20141218

DOCDB simple family (application)

US 2013023227 W 20130125; AU 2013211910 A 20130125; CA 2899172 A 20130125; CN 201380015975 A 20130125; EP 13706325 A 20130125; US 201314374632 A 20130125