

Title (en)

SYSTEM FOR STORING AND OUTPUTTING THERMAL ENERGY AND METHOD FOR OPERATING SAID SYSTEM

Title (de)

ANLAGE ZUR SPEICHERUNG UND ABGABE THERMISCHER ENERGIE UND VERFAHREN ZU DEREN BETRIEB

Title (fr)

INSTALLATION DE STOCKAGE ET DE DISTRIBUTION D'ÉNERGIE THERMIQUE ET PROCÉDÉ POUR FAIRE FONCTIONNER CETTE INSTALLATION

Publication

**EP 2825735 A1 20150121 (DE)**

Application

**EP 13718802 A 20130328**

Priority

- DE 102012206296 A 20120417
- EP 2013056735 W 20130328

Abstract (en)

[origin: WO2013156292A1] The invention relates to a system for storing and outputting thermal energy and a method for operating said system. The system operates according to the Brayton cycle, wherein a heat accumulator (14) is charged by means of a compressor (13) and a cold accumulator (16) is charged by means of turbines (15). Said cycle is reversed for discharging. In addition, according to the invention, the cold accumulator supplies a cooling circuit, which provides the cooling for a superconducting generator (36) by means of a cooling unit (33). A favorable generator weight can thereby be advantageously achieved in particular for wind turbines (22), because the generators are limited regarding the weight thereof due to being housed in the nacelle of the wind power plant (22). Thus, advantageously higher power can be converted in the wind power plant (22).

IPC 8 full level

**F01K 3/12** (2006.01); **F25B 9/06** (2006.01); **F25B 13/00** (2006.01); **F25B 25/00** (2006.01); **F25B 30/02** (2006.01)

CPC (source: EP US)

**F01K 3/06** (2013.01 - US); **F01K 3/12** (2013.01 - EP US); **F25B 9/004** (2013.01 - EP US); **F25B 9/06** (2013.01 - EP US); **F25B 2400/053** (2013.01 - EP US); **F25B 2400/14** (2013.01 - EP US); **F25B 2400/24** (2013.01 - EP US)

Citation (search report)

See references of WO 2013156292A1

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)

**DE 102012206296 A1 20131017**; CN 104302875 A 20150121; EP 2825735 A1 20150121; US 2015059342 A1 20150305; WO 2013156292 A1 20131024

DOCDB simple family (application)

**DE 102012206296 A 20120417**; CN 201380025845 A 20130328; EP 13718802 A 20130328; EP 2013056735 W 20130328; US 201314394141 A 20130328