

Title (en)

METHOD FOR CONTROLLING THE TEMPERATURE OF A BATTERY ARRANGEMENT AND TEMPERATURE-CONTROLLED BATTERY ARRANGEMENT

Title (de)

VERFAHREN ZUR TEMPERIERUNG EINER BATTERIEANORDNUNG UND TEMPERIERTE BATTERIEANORDNUNG

Title (fr)

PROCÉDÉ DE RÉGULATION DE TEMPÉRATURE D'UNE BATTERIE ET BATTERIE RÉGULÉE EN TEMPÉRATURE

Publication

EP 3718163 A1 20201007 (DE)

Application

EP 18812111 A 20181127

Priority

- DE 102017128152 A 20171128
- DE 102018109127 A 20180417
- EP 2018082641 W 20181127

Abstract (en)

[origin: WO2019105909A1] The invention relates to a method for controlling the temperature of a battery arrangement made up of at least one battery cell by means of a cyclically operated adsorption heat pump, consisting of an adsorber and a phase converter with a working medium circulated between the adsorber and the phase converter, wherein the at least one battery cell is brought into thermal contact with an adsorbent of the adsorber and the temperature of the battery cell is controlled in that the battery arrangement picks up adsorption heat and gives off desorption heat, wherein the heat released in the phase converter during a condensation process of the working medium and the heat picked up during an evaporation process of the working medium is dissipated to the environment and supplied from the latter. The method is characterized in that the battery arrangement and the adsorber are, if necessary, brought into thermal contact, via an auxiliary fluid circuit, with a heat transfer fluid circulated in the auxiliary fluid circuit, wherein the heat transfer fluid is brought into thermal contact with external heat sources and/or heat sinks, wherein the battery arrangement is supplied, if necessary, with thermal energy from external heat sources via the auxiliary fluid circuit or thermal energy is withdrawn from the battery arrangement via the auxiliary fluid circuit and dissipated to external heat sources.

IPC 8 full level

H01M 10/625 (2014.01); **H01M 10/659** (2014.01); **H01M 10/663** (2014.01)

CPC (source: EP KR US)

H01M 10/625 (2015.04 - EP KR US); **H01M 10/6552** (2015.04 - US); **H01M 10/659** (2015.04 - EP KR US); **H01M 10/663** (2015.04 - EP KR US); **H01M 10/6568** (2015.04 - KR); **H01M 2220/20** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP)

Citation (search report)

See references of WO 2019105909A1

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 2019105909 A1 20190606; CN 111406343 A 20200710; EP 3718163 A1 20201007; JP 2021504928 A 20210215; KR 20200092364 A 20200803; US 2020287255 A1 20200910

DOCDB simple family (application)

EP 2018082641 W 20181127; CN 201880076948 A 20181127; EP 18812111 A 20181127; JP 2020545881 A 20181127; KR 20207018588 A 20181127; US 201816763973 A 20181127