

Title (en)
METHOD FOR STORING AND PRODUCING ENERGY BY MEANS OF COMPRESSED AIR WITH ADDITIONAL ENERGY RECOVERY

Title (de)
VERFAHREN ZUR SPEICHERUNG UND ERZEUGUNG VON ENERGIE MITTELS DRUCKLUFT MIT ZUSÄTZLICHER ENERGIERÜCKGEWINNUNG

Title (fr)
PROCEDE DE STOCKAGE ET DE PRODUCTION D' ENERGIE PAR AIR COMPRI ME AVEC RECUPERATION D' ENERGIE SUPPLEMENTAIRE

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Application
EP 18799555 A 20181114

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• FR 1761916 A 20171211
• EP 2018081168 W 20181114

Abstract (en)
[origin: WO2019115120A1] The invention relates to a method for storing and producing energy by means of compressed air, comprising the following steps: - compressing the air using staged compressors, during which time the air is cooled, after at least one compression step, by means of an exchange with a heat transfer fluid, - storing the compressed air and the hot heat transfer fluid after the exchange performed during the compression steps, - expanding the air in multiple stages by means of energy production turbines, during which time the air is heated, after at least one expansion step, by means of the hot transfer fluid tapped from the storage means. According to the invention, after the expanded air is heated and before being recirculated to the compression step, the transfer fluid is cooled by an additional energy recovery loop comprising a pump, an exchanger and a turbine, and an additional transfer fluid.

IPC 8 full level
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Citation (search report)
See references of WO 2019115120A1

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FR 3074846 A1 20190614; **FR 3074846 B1 20191220**; CN 111448368 A 20200724; EP 3724458 A1 20201021; US 2021172372 A1 20210610; WO 2019115120 A1 20190620

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