

Title (en)

DEVICE FOR A UTILIZATION OF WASTE HEAT FROM SOLAR PHOTOVOLTAIC PANELS

Title (de)

VORRICHTUNG ZUR NUTZUNG VON ABWÄRME AUS FOTOVOLTAISCHEN SOLARMODULEN

Title (fr)

DISPOSITIF D'UTILISATION DE LA CHALEUR RÉSIDUELLE DE PANNEAUX PHOTOVOLTAÏQUES SOLAIRES

Publication

EP 3918642 A4 20221026 (EN)

Application

EP 20747902 A 20200127

Priority

- CZ 201940 A 20190128
- CZ 2020050003 W 20200127

Abstract (en)

[origin: WO2020156598A1] A device (1) for a utilization of waste heat from solar photovoltaic panels (2) to increase their efficiency actively removes the waste heat from photovoltaic panels (2) to utilize it in two ways. The first way comprises a heat exchanger (5) supplying a heat pump (6) for further utilization of a part of the waste heat as such while the other way comprises a Peltier cell (8) to convert the rest of the waste heat to the additional electrical energy. An absorber (3) comprising a homogenizing plate (4) is installed to supply both the heat exchanger (5) and the Peltier cell (8) with the waste heat.

IPC 8 full level

H01L 31/052 (2014.01); **F24D 17/02** (2006.01); **F24H 4/00** (2006.01); **F25B 30/00** (2006.01); **H01L 31/0525** (2014.01); **H01L 35/28** (2006.01); **H02S 40/42** (2014.01); **H02S 40/44** (2014.01); **F24D 18/00** (2022.01)

CPC (source: CZ EP US)

F24D 17/02 (2013.01 - CZ); **F24H 4/00** (2013.01 - CZ); **F25B 30/00** (2013.01 - CZ); **H01L 31/052** (2013.01 - CZ); **H01L 31/0525** (2013.01 - CZ); **H02S 40/42** (2014.12 - CZ EP US); **H02S 40/425** (2014.12 - EP); **H02S 40/44** (2014.12 - CZ EP); **H10N 10/00** (2023.02 - EP); **F24D 18/00** (2022.01 - CZ EP US); **F24D 2101/40** (2022.01 - CZ EP US); **F24D 2101/60** (2022.01 - CZ EP US); **F24D 2103/13** (2022.01 - CZ EP US); **F24D 2200/02** (2013.01 - EP); **F24D 2200/12** (2013.01 - EP); **F24D 2200/16** (2013.01 - EP); **F24H 2240/01** (2013.01 - CZ EP US); **F24H 2240/08** (2013.01 - CZ EP US); **Y02B 10/70** (2013.01 - EP); **Y02B 30/52** (2013.01 - EP); **Y02E 10/50** (2013.01 - EP); **Y02E 10/60** (2013.01 - EP)

Citation (search report)

- [A] JP 2017058046 A 20170323 - DAIWA HOUSE IND
- [A] CN 105187009 A 20151223 - UNIV TIANJIN
- [A] WO 2018148796 A1 20180823 - QINGDAO AUSTECH SOLAR TECH CO LTD [CN]
- See also references of WO 2020156598A1

Designated contracting state (EPC)

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DOCDB simple family (application)

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