

Title (en)
HIGH-FREQUENCY HEATING DEVICE

Title (de)
HOCHFREQUENZ-ERWÄRMUNGSVORRICHTUNG

Title (fr)
DISPOSITIF CHAUFFANT À HAUTE FRÉQUENCE

Publication
EP 3503681 A4 20191120 (EN)

Application
EP 17843288 A 20170724

Priority
• JP 2016162145 A 20160822
• JP 2017026620 W 20170724

Abstract (en)
[origin: EP3503681A1] A high-frequency heating device (1a) includes a generation unit (8), a surface wave exciter (10), a first connecting unit (12), and a reuse unit (14). The generation unit (8) generates microwaves. The surface wave exciter (10) includes a periodic structure and heats a heating subject (6) by propagating the microwaves in a surface wave mode. The first connecting unit (12) is disposed at one end portion (15) of the surface wave exciter (10). The microwaves generated by the generation unit (8) are supplied to the surface wave exciter (10) through the first connecting unit (12). The reuse unit (14) reuses, for heating the heating subject (6), the microwaves that have reached another end portion (17) of the surface wave exciter (10) located in the propagation direction of the microwaves from one end portion (15) of the surface wave exciter (10). According to the present aspect, microwaves that have not been absorbed by the heating subject can be reused for heating the heating subject.

IPC 8 full level
H05B 6/74 (2006.01); **H05B 6/70** (2006.01)

CPC (source: EP)
H05B 6/70 (2013.01); **H05B 6/707** (2013.01)

Citation (search report)
• [X] EP 2741574 A1 20140611 - PANASONIC CORP [JP]
• [X] EP 2931007 A1 20151014 - PANASONIC IP MAN CO LTD [JP]
• [X] WO 2015129233 A1 20150903 - PANASONIC CORP [JP]
• [X] FR 2310058 A1 19761126 - MATSUSHITA ELECTRIC IND CO LTD [JP]
• [A] EP 1619933 A1 20060125 - MATSUSHITA ELECTRIC IND CO LTD [JP]
• [A] US 2014273532 A1 20140918 - NASMAN RONALD [US], et al
• [A] EP 2205043 A1 20100707 - PANASONIC CORP [JP]
• See references of WO 2018037802A1

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)
EP 3503681 A1 20190626; EP 3503681 A4 20191120; EP 3503681 B1 20200513; CN 109076656 A 20181221; CN 109076656 B 20201208; JP 6967707 B2 20211117; JP WO2018037802 A1 20190620; WO 2018037802 A1 20180301

DOCDB simple family (application)
EP 17843288 A 20170724; CN 201780029140 A 20170724; JP 2017026620 W 20170724; JP 2018535538 A 20170724