

Title (en)
MICROWAVE TREATMENT APPARATUS

Title (de)
VORRICHTUNG FÜR MIKROWELLENBEHANDLUNG

Title (fr)
APPAREIL DE TRAITEMENT PAR MICRO-ONDES

Publication
EP 3435738 A4 20190403 (EN)

Application
EP 17770007 A 20170313

Priority
• JP 2016057956 A 20160323
• JP 2017009910 W 20170313

Abstract (en)
[origin: EP3435738A1] A microwave treatment apparatus (101) comprises: a heating chamber (11); an oscillation source (1) that generates a microwave; a base plate disposed in the heating chamber (11) for placing thereon a heated object (7); and a waveguide (6) that guides the microwave into the heating chamber. The microwave treatment apparatus (101) further comprises: a periodic structure (5) disposed in the waveguide for causing the microwave to propagate in a surface wave mode; a detection antenna (9) near the periodic structure (5); a detector that detects an electromagnetic wave received by the detection antenna (9); and a controller (10) that controls the oscillation source (1). The controller (10) recognizes a power distribution of the electromagnetic field near the periodic structure (5) based on the detected electromagnetic wave and causes the oscillation source (1) to set the oscillation frequency to either a first oscillation frequency or a second oscillation frequency according to the power distribution of the electromagnetic field. In this aspect, a desirable power distribution of the electromagnetic field near the periodic structure can be maintained by correcting a characteristic change of the periodic structure.

IPC 8 full level
H05B 6/74 (2006.01); **H05B 6/68** (2006.01); **H05B 6/70** (2006.01)

CPC (source: EP)
H05B 6/68 (2013.01); **H05B 6/705** (2013.01); **H05B 6/707** (2013.01); **H05B 6/74** (2013.01)

Citation (search report)
• [A] JP H04371724 A 19921224 - MATSUSHITA ELECTRIC IND CO LTD
• [A] JP H06260275 A 19940916 - MATSUSHITA ELECTRIC IND CO LTD
• [A] WO 2015129233 A1 20150903 - PANASONIC CORP [JP]
• [A] FR 2310058 A1 19761126 - MATSUSHITA ELECTRIC IND CO LTD [JP]
• [A] JP S5698 U 19810106
• See references of WO 2017163964A1

Cited by
EP3481150A4

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 3435738 A1 20190130; EP 3435738 A4 20190403; EP 3435738 B1 20200212; CN 108781487 A 20181109; CN 108781487 B 20210202; JP WO2017163964 A1 20190131; WO 2017163964 A1 20170928

DOCDB simple family (application)
EP 17770007 A 20170313; CN 201780017063 A 20170313; JP 2017009910 W 20170313; JP 2018507235 A 20170313