Title (en)

INDUCTION HEATING UNIT, INDUCTION COOKING DEVICE, AND METHOD FOR OPERATING AN INDUCTION HEATING UNIT

Title (de)

INDUKTIONSHEIZEINHEIT, INDUKTIONSKOCHVORRICHTUNG UND VERFAHREN ZUM BETRIEB EINER INDUKTIONSHEIZEINHEIT

Title (fr)

UNITÉ DE CHAUFFAGE PAR INDUCTION, DISPOSITIF DE CUISSON PAR INDUCTION ET PROCÉDÉ DE FONCTIONNEMENT D'UNE UNITÉ DE CHAUFFAGE PAR INDUCTION

Publication

EP 4002955 A1 20220525 (EN)

Application

EP 20207654 A 20201113

Priority

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Abstract (en)

The invention relates to an induction heating unit (1), comprising at least one resonant tank (30) with at least one induction heating element (32, 33), a power requesting unit (60) for requesting a power (PR) of the at least one induction heating element (32), a driving unit (52) for driving the resonant tank (30), in particular by oscillating the resonant tank (30) by means of a switching element (35), by a driving signal comprising a series of subsequent sequences for generating a heating power (PH), each sequence comprising a first subsequence (S1) with a first alternating signal and with a first subsequence duration (D1), causing an activation of the resonant tank (30) with a predetermined power (PM), a subsequent second subsequence (S2) with an at least essentially non-alternating signal and with a second subsequence duration (D2), causing a deactivation of the resonant tank (30) and a subsequent third subsequence (S3) with a second alternating signal and a with a third subsequence duration (D3), causing an activation of the resonant tank (30) with less than the predetermined power (PM), an induction cooking device and a corresponding method.

IPC 8 full level

H05B 6/06 (2006.01)

CPC (source: EP)

H05B 6/062 (2013.01)

Citation (search report)

- [XI] EP 1951003 A1 20080730 - WHIRLPOOL CO [US], et al
- [A] EP 3291643 A1 20180307 - SAMSUNG ELECTRONICS CO LTD [KR]
- [A] EP 2445306 A2 20120425 - FAGORBRANDT SAS [FR]
- [A] IZAKI K ET AL: "NEW CONSTANT-FREQUENCY VARIABLE POWERED QUASIRESONANT INVERTER TOPOLOGY USING SOFT-SWITCHED TYPE IGBTS FOR INDUCTION-HEATED COOKING APPLIANCE WITH ACTIVE POWER FILTER", EPE '95: 6TH. EUROPEAN CONFERENCE ON POWER ELECTRONICS AND APPLICATIONS. SEVILLA, SEPT. 19 - 21, 1995; [EUROPEAN CONFERENCE ON POWER ELECTRONICS AND APPLICATIONS], BRUSSELS, EPE ASSOCIATION, B, vol. 2, 19 September 1995 (1995-09-19), pages 2.129 - 2.134, XP000537734

Designated contracting state (EPC)

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BA ME

DOCDB simple family (publication)

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