

## (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2022/0353959 A1 VIROLI et al.

Nov. 3, 2022 (43) **Pub. Date:** 

### (54) METHOD FOR DETERMINING PROPERTIES OF ELECTRICAL CURRENT PROVIDED TO AN INDUCTION HEATING ELEMENT

(71) Applicant: ELECTROLUX APPLIANCES AKTIEBOLAG, Stockholm (SE)

(72) Inventors: Alex VIROLI, Forli (IT); Laurent JEANNETEAU, Compiègne (FR); Massimo NOSTRO, Forli (IT); Massimo ZANGOLI, Forli (IT); Svend Erik CHRISTIANSEN, Forli (IT)

(21) Appl. No.: 17/764,271 (22) PCT Filed: Sep. 22, 2020

(86) PCT No.: PCT/EP2020/076352 § 371 (c)(1),

(2) Date:

Mar. 28, 2022

#### (30)Foreign Application Priority Data

Sep. 30, 2019 (EP) ...... 19200654.2

### **Publication Classification**

(51) Int. Cl. H05B 6/12 (2006.01)H05B 6/68 (2006.01)

U.S. Cl. CPC ...... H05B 6/1236 (2013.01); H05B 6/682 (2013.01); H05B 6/686 (2013.01)

#### (57)**ABSTRACT**

The invention relates to a method for determining properties of the electrical current provided to an induction heating element (2) of an induction cooking appliance (1), the induction cooking appliance (1) comprising a heating power energy unit (3) including a heating power generator (4) with at least one switching element (5) adapted to provide pulsed electric power to said induction heating element (2), the induction cooking appliance (1) further comprising an oscillating circuit (6) comprising at least one resonance capacitor (6.1, 6.2), said induction heating element (2) being electrically coupled with said heating power generator (4) and said oscillating circuit (6), the induction cooking appliance (1) further comprising a control entity (8), wherein an input of a measurement circuit (9) is coupled with a node of the heating power energy unit (3).

