

Title (en)
method for monitoring and controlling a cooking process

Title (de)
Verfahren zum Überwachen und Führen eines Garprozesses

Title (fr)
procédé destiné à la surveillance et contrôle d'un processus de cuisson

Publication
EP 2154435 B1 20160316 (DE)

Application
EP 09167143 A 20090804

Priority
DE 102008036684 A 20080806

Abstract (en)
[origin: EP2154435A2] The cooking appliance comprises a cooking area (10), a channel (16) over which a gaseous medium passes from the cooking area, a sensor unit (24, 26, 28) for determining the pressure difference between two places in interior (12, 18) of the cooking appliance, a control device (36) to control the cooking process of the cooking goods present in the cooking area in dependent upon the determined pressure difference, a moisture sensor to determine moisture value in the cooking area, a temperature sensor to determine temperature in the cooking area and/or a density sensor. The cooking appliance comprises a cooking area (10), a channel (16) over which a gaseous medium passes from the cooking area, a sensor unit (24, 26, 28) for determining the pressure difference between two places in interior (12, 18) of the cooking appliance, a control device (36) to control the cooking process of the cooking goods present in the cooking area in dependent upon the determined pressure difference, a moisture sensor to determine moisture value in the cooking area, a temperature sensor to determine temperature in the cooking area and/or a density sensor to determine the density of the gaseous medium in the cooking area, for determining the load of the cooking goods in the cooking area and/or the discharge condition of the cooking goods, a control- or regulating unit that is connected with the sensor unit, the processing unit, the moisture sensor, the temperature sensor and/or density sensor on one hand and with a further function unit of the cooking appliance on the other hand. One of the places lies in the interior of the channel. The cooking appliance is arranged to determine a cooking product present in the cooking area, a gas volume stream emerging from the cooking area, a gas measuring stream emerging from the cooking area, a load with which the cooking area is loaded, and/or a discharge condition of the cooking product in the cooking area, whether the cooked goods are frozen or fresh, from the pressure difference and/or the progress of the pressure difference over the time of a source steam rate. The channel comprises a flow for a fluid medium from the cooking area. The interior of the cooking appliance comprises interior of the cooking area and the interior of the channels, where the another place lies in the interior of the cooking area. Both places lie in the interior of the channel. The sensor unit is arranged to produce a difference signal proportional to the pressure difference between the both places in the interior of the cooking appliances. The sensor unit for determining the pressure difference between both places in the interior of the cooking appliances comprises a first pressure sensor for producing a first sensor signal, a second pressure sensor for producing a second sensor signals, a processing unit to form a difference signal from the first sensor signal and the second sensor signal, and a difference pressure sensor for producing a corresponding difference signals. The sensor unit or the processing unit is arranged to determine a value proportional to the product from gas volume stream or gas measuring stream stepping from the cooking area, from the difference signal. The processing arrangement is implemented with the control or regulating unit. The further function unit comprises a heating device, a cooling device, a blower device, a pumping device, an energy storage device, a moisture supply device and/or moisture removal device. An independent claim is included for a method for observing the cooking process of cooking goods in a cooking area of a cooking appliance.

IPC 8 full level
F24C 7/08 (2006.01); **A23L 5/10** (2016.01)

CPC (source: EP)
F24C 7/08 (2013.01)

Cited by
CN114468787A; CN113940545A; CN113189272A; CN115486690A; ITPD20100163A1; EP2840318A1; EP2220970A1; US10098354B2; US11732898B2; WO2015024689A1

Designated contracting state (EPC)
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 SE SI SK SM TR

DOCDB simple family (publication)
EP 2154435 A2 20100217; EP 2154435 A3 20101208; EP 2154435 B1 20160316; DE 102008036684 A1 20100211

DOCDB simple family (application)
EP 09167143 A 20090804; DE 102008036684 A 20080806