

Title (en)

System for introducing moisture into an oven for cleaning

Title (de)

Vorrichtung zum Einbringen von Feuchte in einen Ofen für seine Reinigung

Title (fr)

Système pour l'introduction de l'humidité dans un four pour son nettoyage

Publication

EP 1557612 A1 20050727 (EN)

Application

EP 04001436 A 20040123

Priority

EP 04001436 A 20040123

Abstract (en)

The present invention provides a system for introducing heat and moisture into an oven cavity in accord with a method that is initiated when the oven user selects an oven cleaning cycle. Initially, the temperature of the oven cavity is sensed to determine if the oven is below a predetermined start temperature TEMPstart. Upon confirmation that the oven is below the predetermined start temperature TEMPstart, heat and moisture are introduced into the oven cavity until the oven cavity reaches a predetermined maximum temperature TEMPmax, at which temperature the oven cavity walls are less than 100 Celsius and the relative humidity within the oven cavity approaches 100%. Heat and moisture can be introduced by energizing heating elements and evaporating water that has been added into the oven cavity or alternatively, by use of a steam generator or through a combination of the two. The oven cavity is subsequently maintained at the predetermined maximum temperature TEMPmax for a predetermined period of time Tmaintain. Following the predetermined period of time Tmaintain, the oven cavity is allowed to cool to a predetermined, safe clean temperature TEMPclean whereupon a signal is provided to alert the user that the cleaning cycle is complete. The invention may be practiced by use of a flame and heat resistant sponge, which prior to the start of the oven cleaning cycle, the user places within the oven cavity and pours or adds water to the sponge. Further, the oven cavity may include a vent opening which is partially obstructed to reduce the cross sectional area of the vent opening during the oven cleaning cycle. <IMAGE>

IPC 1-7

F24C 14/00

IPC 8 full level

F24C 14/00 (2006.01)

CPC (source: EP)

F24C 14/005 (2013.01)

Citation (search report)

- [A] DE 2842771 A1 19800410 - LECHMETALL LANDSBERG GMBH
- [A] DE 19730610 C1 19981022 - WIESHEU GMBH [DE]
- [A] US 2003172962 A1 20030918 - RIEFENSTEIN LUTZ [DE], et al
- [A] US 3331943 A 19670718 - EFF CHRISTIAN A
- [E] EP 1388713 A2 20040211 - MATSUSHITA ELECTRIC IND CO LTD [JP]

Cited by

EP2944881A1; CN111996770A; EP2708819A1; EP2040005A1; ITPD20090121A1; US2012145696A1; US8373098B2; EP2421416A4; EP3539427A1; US9599347B2; US8569660B2; US7487716B2; US10184667B2; WO2010128471A3; WO2015172909A1

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

EP 1557612 A1 20050727; EP 1557612 B1 20061220; DE 602004003783 D1 20070201; DE 602004003783 T2 20070426; ES 2276174 T3 20070616

DOCDB simple family (application)

EP 04001436 A 20040123; DE 602004003783 T 20040123; ES 04001436 T 20040123