

Title (en)

DEVICE AND METHOD FOR CONTROLLING A FUEL-OXIDIZER MIXTURE IN A PREMIX GAS BURNER

Title (de)

VORRICHTUNG UND VERFAHREN ZUR STEUERUNG EINES BRENNSTOFF-OXIDATIONSMITTEL-GEMISCHES IN EINEM VORMISCHGASBRENNER

Title (fr)

DISPOSITIF ET PROCÉDÉ DE COMMANDE D'UN MÉLANGE COMBUSTIBLE-OXYDANT DANS UN BRÛLEUR À GAZ À PRÉMÉLANGE

Publication

**EP 4242518 A1 20230913 (EN)**

Application

**EP 23160666 A 20230308**

Priority

IT 202200004406 A 20220308

Abstract (en)

A method for controlling a fuel-oxidizer mixture in a premix gas burner (100), comprising the following steps performed by a processor: receiving (F1, F2) a flame signal (401, 402) representing the presence of a flame deriving from the combustion of a fuel belonging to a first predetermined type or a second predetermined type inside a combustion cell (TC) of the burner (100); accessing (F3', F3'') fuel data (403), representing the fact that the gas fuel belongs to the first type or the second type; generating (F6) drive signals (501) to control a gas flow regulating valve (7) that supplies gas to the burner and to control a rotation speed of a fan (9) configured to take in oxidative air; sending (F7) the drive signals (501) to the gas flow regulating valve (7) and to a motor connected to the fan (9). The processor has access to a memory unit containing first regulation data (R1) and second regulation data (R2), different from the first regulation data (R1) and is programmed to generate the drive signals (501) based on the first regulation data (R1) or, alternatively, on the second regulation data (R2), depending on the fuel data (403).

IPC 8 full level

**F23N 1/02** (2006.01); **F23N 5/08** (2006.01); **F23N 5/12** (2006.01)

CPC (source: CN EP US)

**F23D 14/02** (2013.01 - US); **F23D 14/32** (2013.01 - US); **F23D 14/60** (2013.01 - CN); **F23D 14/62** (2013.01 - CN); **F23N 1/022** (2013.01 - EP); **F23N 1/025** (2013.01 - US); **F23N 1/027** (2013.01 - CN); **F23N 5/082** (2013.01 - EP); **F23N 5/085** (2013.01 - US); **F23N 5/123** (2013.01 - EP); **F23N 5/126** (2013.01 - US); **F23N 5/187** (2013.01 - US); **F23N 5/26** (2013.01 - CN); **F23N 5/245** (2013.01 - US); **F23N 2005/185** (2013.01 - US); **F23N 2221/10** (2020.01 - EP); **F23N 2223/02** (2020.01 - US); **F23N 2223/50** (2020.01 - US); **F23N 2225/16** (2020.01 - US); **F23N 2229/12** (2020.01 - US); **F23N 2229/14** (2020.01 - EP US); **F23N 2229/16** (2020.01 - CN); **F23N 2235/16** (2020.01 - US); **F23N 2239/04** (2020.01 - US)

Citation (applicant)

- FR 2301775 A1 19760917 - ELECAM SNC C AMADASI ET L CONT [IT]
- WO 2004053900 A2 20040624 - AMETEK INC [US], et al
- WO 2009110015 A1 20090911 - BERTELLI & PARTNERS SRL [IT], et al
- EP 3663648 A1 20200610 - VAILLANT GMBH [DE]
- US 2015011009 A1 20150108 - SCHMIDT OLIVER [DE], et al

Citation (search report)

- [XAI] EP 3663648 A1 20200610 - VAILLANT GMBH [DE]
- [A] US 2015011009 A1 20150108 - SCHMIDT OLIVER [DE], et al
- [A] US 6135760 A 20001024 - CUSACK DEIDRE E [US], et al

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**EP 4242518 A1 20230913**; CA 3192036 A1 20230908; CN 116734286 A 20230912; US 2023288063 A1 20230914

DOCDB simple family (application)

**EP 23160666 A 20230308**; CA 3192036 A 20230306; CN 202310216545 A 20230308; US 202318178742 A 20230306