

Title (en)

COMBUSTION DEVICE WITH AIR RATIO REGULATION DEVICE, AND HEATING APPARATUS

Title (de)

VERBRENNUNGSVORRICHTUNG MIT REGELEINRICHTUNG ZUR LUFTZAHL-REGELUNG, SOWIE HEIZGERÄT

Title (fr)

DISPOSITIF DE COMBUSTION AVEC DISPOSITIF DE RÉGLAGE DU RAPPORT AIR/AIR, AINSI QU'APPAREIL DE CHAUFFAGE

Publication

EP 3978805 B1 20231227 (DE)

Application

EP 21199318 A 20210928

Priority

GB 202015572 A 20201001

Abstract (en)

[origin: GB2599423A] A method for operating a combustion device 100 to provide a combustible mixture composed of an air stream 'A' and a hydrogen combustion gas stream 'G', and to burn the mixture 'M' so that heat is generated. The combustible air/fuel mixture is regulated as a function of the heat required, and when low heat power is required the combustible mixture is controlled such that it is a lean mixture, and/or when a high heat power is required the combustible mixture is controlled such that it is a rich mixture. In particular, the air quantity, represented by an air number λ of the air/combustion gas mixture stream is regulated within defined limits in dependence of the range of heating power, and as such $\lambda = \lambda(Q)$ and is regulated within the boundaries of: $0.15 / Q + 1 \leq \lambda \leq 0.175 / Q + 1.25$, when the relative heating power 'Q' is in the range between 0 and 1. The regulating arrangement may include a fan 102, a fuel gas metering unit 104, a mixing unit 106 and regulating apparatus 110.

IPC 8 full level

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CPC (source: EP GB)

F23D 14/02 (2013.01 - EP); **F23N 1/00** (2013.01 - GB); **F23N 1/002** (2013.01 - EP); **F23N 1/022** (2013.01 - EP); **F23N 3/00** (2013.01 - GB); **F23N 3/002** (2013.01 - EP); **F23N 5/00** (2013.01 - GB); **F23N 5/006** (2013.01 - EP); **F23N 5/123** (2013.01 - EP); **F23C 2900/9901** (2013.01 - EP); **F23N 2233/08** (2020.01 - EP)

Cited by

EP4306850A1; EP4317778A1; WO2024012837A1; WO2023247690A1; WO2023247691A1; WO2023247689A1; WO2023247692A1

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