Title (en)

BURNER FOR REDUCING NOX EMISSIONS AND METHOD FOR OPERATING THE BURNER

Title (de)

BRENNER ZUM REDUZIEREN VON NOX-EMISSIONEN UND VERFAHREN ZUM BETREIBEN DES BRENNERS

Title (fr)

BRÛLEUR POUR RÉDUIRE LES ÉMISSIONS DE NOX ET PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER LE BRÛLEUR

Publication

EP 3864345 A1 20210818 (DE)

Application

EP 19732650 A 20190621

Priority

EP 2019066530 W 20190621

Abstract (en)

[origin: WO2020253970A1] The invention relates to a burner (10; 11; 12) for heating a heating space (55; 55'), with reduction of NOx emissions. The burner (10; 11; 12) comprises a mixing and combustion chamber (54; 54'), a mixing and igniting device (51) which is arranged in the mixing and combustion chamber (54; 54'), and a fuel supply (50) which is connected to the mixing and igniting device (51) and is designed to supply fuel to the mixing and igniting device (51). Furthermore, an air supply (30, 30') is provided, which is designed to supply at least one partial air flow (L1) to the mixing and combustion chamber (54; 54'). A combustion chamber opening (53; 53') opens the mixing and combustion chamber (54; 54') toward a heating space (55; 55') to be heated. In addition, control means (60) are designed to control a fuel flow (B) via the fuel supply (50) and to control at least one partial air flow (L1) via the air supply (30; 30'), the burner (10; 11; 12) and the control means (60) being designed for operation of the burner (10; 11; 12) with a stable flame (56; 56') which extends from the mixing and igniting device (51) into the heating space (55; 55') through the combustion chamber opening (53; 53'). The cross-sectional area of the combustion chamber opening (53; 53'), which area is relative to the burner power, lies in the range between 1.5 mm2/kW and 10 mm2/kW.

IPC 8 full level

F23C 3/00 (2006.01); **F23C 7/06** (2006.01); **F23C 9/00** (2006.01); **F23L 15/04** (2006.01)

CPC (source: EP US)

F23C 3/002 (2013.01 - EP US); **F23C 7/06** (2013.01 - EP US); **F23C 9/006** (2013.01 - EP); **F23D 14/22** (2013.01 - US); **F23L 15/04** (2013.01 - EP US); F23C 2900/06041 (2013.01 - EP); F23C 2900/07022 (2013.01 - EP); F23C 2900/99001 (2013.01 - EP); F23C 2900/99006 (2013.01 - EP US); F23D 2207/00 (2013.01 - US); F23D 2208/005 (2013.01 - US)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020253970 A1 20201224; CN 113167467 A 20210723; CN 113167467 B 20240308; EP 3864345 A1 20210818; JP 2022536998 A 20220823; MX 2021006327 A 20210811; US 2022034504 A1 20220203

DOCDB simple family (application)

EP 2019066530 W 20190621; CN 201980078818 A 20190621; EP 19732650 A 20190621; JP 2021531376 A 20190621; MX 2021006327 A 20190621; US 201917297896 A 20190621