

Title (en)  
BURNER DEVICE AND MULTI-TUBE THROUGH-FLOW BOILER DEVICE

Title (de)  
BRENNERVORRICHTUNG UND MEHRROHRDURCHFLUSSKESSELVORRICHTUNG

Title (fr)  
DISPOSITIF BRÛLEUR ET DISPOSITIF CHAUDIÈRE À ÉCOULEMENT TRANSVERSAL ET À TUBES MULTIPLES

Publication  
**EP 3719396 A1 20201007 (EN)**

Application  
**EP 18883640 A 20181127**

Priority  
• JP 2017229025 A 20171129  
• JP 2018043590 W 20181127

Abstract (en)  
A burner device (1) for supplying a mixture (MG) of a fuel gas (F) and a combustion-supporting gas (A) into a combustion region (R) includes: a primary mixing path (27) configured to be introduced with and mix the fuel gas and the combustion-supporting gas; a secondary mixing chamber (33) defined inside a wall surface having a rotating-body shape and configured to be introduced with and further mix the mixture (MG) from the primary mixing path (27); and a plurality of mixture introduction holes (35) defined in a circumferential wall (5a) of the secondary mixing chamber (33) and configured to introduce the mixture (MG) from the primary mixing path (27) into the secondary mixing chamber (33) in an eccentric direction of the secondary mixing chamber (33) to generate a swirling flow of the mixture (MG).

IPC 8 full level  
**F23D 14/02** (2006.01); **F22B 21/06** (2006.01); **F23D 14/62** (2006.01); **F23R 3/28** (2006.01)

CPC (source: EP KR)  
**F22B 21/06** (2013.01 - KR); **F23D 14/02** (2013.01 - EP KR); **F23D 14/62** (2013.01 - EP KR); **F23R 3/28** (2013.01 - KR);  
**F23R 3/286** (2013.01 - EP); **F23D 2900/14021** (2013.01 - EP); **F23D 2900/14241** (2013.01 - EP)

Cited by  
CN113776085A; EP4382803A1

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)  
**EP 3719396 A1 20201007**; **EP 3719396 A4 20210804**; CN 111630320 A 20200904; CN 111630320 B 20230110; JP 2019100571 A 20190624; JP 7126346 B2 20220826; KR 102462494 B1 20221103; KR 20200090883 A 20200729; WO 2019107355 A1 20190606

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