

Title (en)  
A GAS BURNER APPARATUS WITH PRE-MIXING

Title (de)  
GASBRENNER MIT VORMISCHUNG

Title (fr)  
APPAREIL DE BRÛLEUR À GAZ À PRÉMÉLANGE

Publication  
**EP 2342496 A2 20110713 (EN)**

Application  
**EP 09760634 A 20091027**

Priority  
• IT 2009000487 W 20091027  
• IT PD20080324 A 20081107

Abstract (en)  
[origin: WO2010052746A2] A gas burner apparatus with pre-mixing comprises mixing means for mixing an air/gas mixture which is intended to be conveyed to the intake section of a fan unit (4), whose delivery is conveyed to a combustion head (2) of the burner, the mixing means comprising a plurality of ducts (12), each of which has a region in the form of a Venturi duct with contiguous portions (16a, 16b) which are convergent/divergent, with respect to the direction of flow, and with a restricted duct cross-section (16c) defined between the convergent portion and the divergent portion, there being conveyed in each convergent portion (16a) an air flow which is intended to be mixed with a gas flow which is introduced into the duct at the restricted cross-section (16c), the air/gas mixture being conveyed through the divergent portion (16b) of the duct to the intake section (10) of the fan unit (4). Each duct (12) of the plurality is defined by the engagement of at least a first and a second mutually separate burner region (A,B), along a mutual engagement profile, there being carried on each of the burner regions (A,B) corresponding, separate portions of each of the ducts (12), at least a first fluid-tight sealing element (20) being provided between the burner regions (A,B) along the engagement profile in order to prevent gas and/or air from being drawn in with respect to the ducts (12). The at least first sealing element (20) is interposed between the burner regions (A,B) at the restricted cross-section (16c) of each of the Venturi ducts of the plurality of ducts (12); the at least first sealing element (20) has through-holes (21) which define the restricted cross-section of the corresponding Venturi duct in at least some of the plurality of ducts (12), as a result of the engagement of the burner regions (A,B) along the engagement profile and is interchangeable with at least a second sealing element (20', 20'') which has corresponding through-holes (21', 21''), whose overall size for the relevant cross-sections is different from the overall size for the cross-sections relating to the corresponding holes (21) of the first sealing element (20), so as to vary the overall cross-section defined by the plurality of holes of the ducts, with at least the first element (20) being interchanged with at least the second sealing element (20', 20''), and consequently to control the burner in accordance with the thermal power required and/or the flow resistances which exist in the ducts for supplying the air/gas mixture to the burner.

IPC 8 full level  
**F23D 14/36** (2006.01); **F23D 14/62** (2006.01)

CPC (source: EP US)  
**F23D 14/36** (2013.01 - EP US); **F23D 14/62** (2013.01 - EP US)

Citation (search report)  
See references of WO 2010052746A2

Cited by  
CN110748887A

Designated contracting state (EPC)  
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 SE SI SK SM TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
**WO 2010052746 A2 20100514; WO 2010052746 A3 20110407; WO 2010052746 A8 20100708**; CA 2742758 A1 20100514; CA 2742758 C 20170307; CN 102209869 A 201111005; CN 102209869 B 20130904; EP 2342496 A2 20110713; EP 2342496 B1 20150225; EP 2342496 B8 20150422; IT 1391676 B1 20120117; IT PD20080324 A1 20100508; RU 2011122829 A 20121220; RU 2511820 C2 20140410; UA 101997 C2 20130527; US 2011217664 A1 20110908

DOCDB simple family (application)  
**IT 2009000487 W 20091027**; CA 2742758 A 20091027; CN 200980144831 A 20091027; EP 09760634 A 20091027; IT PD20080324 A 20081107; RU 2011122829 A 20091027; UA A201107242 A 20091027; US 200913127153 A 20091027