

Title (en)

Forced-draft premix gas burner.

Title (de)

Vormischgasbrenner mit Druckluftführung.

Title (fr)

Brûleur à gaz du type à air soufflé et à prémélange.

Publication

EP 0269487 A1 19880601 (FR)

Application

EP 87402425 A 19871027

Priority

FR 8615556 A 19861107

Abstract (en)

[origin: JPS6488015A] PURPOSE: To stabilize a flame over the entire changing range of the supply ratio of air and gas by providing a device with a correction orifice at a flammable gas entrance passage, providing a diaphragm-type passage with a small sectional area at an air entrance passage and then generating an excessive pressure at air being supplied to a pre-mixing room. CONSTITUTION: Air and a flammable gas are supplied from entrance passages 3 and 4 to a pre-mixing room 2 of a low-output burner 1. An orifice is provided at a grill 5 with a proper diameter and distribution state, and flame is adhered or stabilized at the entrance of a combustion room 6 of the burner. The burner I is dipped into a liquid 7 to be heated greatly and ignition is made by supplying a high voltage to an electrode II. For adjusting the flow rate of air and the flammable gas to a proper and needed state over the entire fluctuation range of a supply pressure, a passage 16 with a small sectional area is provided at the air entrance passages 3 and a device 18 with a correction orifice 19 is provided at the flammable gas entrance passage 4. A mixed gas flows to the side of the combustion room 6 and a slightly excessive pressure is formed at the part of the room 2 whose pressure becomes slightly low. The flow rate of the air and the flammable gas is adjusted to a needed value by pressure sensors 20 and 21 and static pressure is secured positively at the air entrance passages 3 and the pre-mixing room.

Abstract (fr)

Brûleur à gaz de relativement faible puissance du type à air soufflé et à prémélange comprenant des arrivées (3, 4) séparées d'air et de gaz combustible dans une chambre (2) de prémélange débouchant sur une chambre (6) de combustion au niveau de laquelle le prémélange est enflammé au moyen d'une électrode (11) d'allumage, les arrivées d'air (3) et de gaz combustible (4) comportant chacune au moins une vanne (22, 23) de débit. Le brûleur (1) est caractérisé en ce que, un organe (18) à orifice calibré (19) du type injecteur est prévu sur l'arrivée (4) de gaz combustible, et un passage (16) de relativement faible section, du type diaphragme, est prévu sur l'arrivée (3) d'air. L'invention s'applique notamment aux installations comprenant ce brûleur en tant que pilote d'allumage.

IPC 1-7

F23D 14/02; **F23C 3/00**; **F23Q 9/00**

IPC 8 full level

F23C 3/00 (2006.01); **F23D 14/02** (2006.01); **F23D 14/62** (2006.01); **F23D 14/74** (2006.01); **F23Q 3/00** (2006.01); **F23Q 9/00** (2006.01)

CPC (source: EP KR US)

F23C 3/00A (2013.01 - EP US); **F23D 14/02** (2013.01 - EP KR US); **F23Q 9/00** (2013.01 - EP US)

Citation (search report)

- [X] US 3957421 A 19760518 - WIKMAN ERNEST H
- [A] EP 0128809 A2 19841219 - GAZ DE FRANCE [FR]
- [A] FR 2510731 A1 19830204 - HUBLARD MARCEL [FR]
- [A] US 4224019 A 19800923 - DILMORE JAMES A
- [A] FR 1057371 A 19540308 - HEURTEY & CIE
- [A] DE 3230853 A1 19840223 - STUENKEL KLAUS ERICH [DE]
- [Y] REVUE GENERALE DE THERMIQUE, vol. 22, no. 253, janvier 1983, pages 27-45, Editions Européennes Thermique & Industrie, Paris, FR; M. FARDEAU: "Nouveaux échangeurs alimentés au gaz naturel pour le chauffage des bains industriels"
- [Y] GAZ D'AUJOURD'HUI, vol. 92, no. 11, novembre 1968, pages 435-441, Paris, FR; M.P. HOSTALIER: "De la combustion submergée aux générateurs à condensation"

Cited by

AP1090A; GB2342984A; GB2270750A; GB2270750B; CN109059003A; US6250913B1; WO9966263A1; US6648932B1

Designated contracting state (EPC)

AT BE CH DE ES GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0269487 A1 19880601; **EP 0269487 B1 19900919**; **EP 0269487 B2 19930811**; AT E56806 T1 19901015; CA 1303476 C 19920616; DE 3765092 D1 19901025; ES 2017742 B3 19910301; ES 2017742 T5 19950801; FR 2606490 A1 19880513; FR 2606490 B1 19900713; GR 3000846 T3 19911115; JP S6488015 A 19890403; KR 880006505 A 19880723; KR 950013963 B1 19951118; US 4875850 A 19891024

DOCDB simple family (application)

EP 87402425 A 19871027; AT 87402425 T 19871027; CA 551191 A 19871106; DE 3765092 T 19871027; ES 87402425 T 19871027; FR 8615556 A 19861107; GR 900400398 T 19900920; JP 28194087 A 19871107; KR 870012012 A 19871029; US 11572887 A 19871102