Title (en)

Gas burner for generating infra-red rays.

Title (de)

Gasbrenner zum Erzeugen von Infrarotstrahlen.

Title (fr)

Brûleur à gaz pour la production de rayons infrarouges.

Publication

EP 0035797 A1 19810916 (DE)

Application

EP 81101800 A 19810311

Priority

IT 8553380 A 19800312

Abstract (en)

1. Gas burner for producing infrared radiation, comprising a tube (2) for feeding in the gas/air mixture and, at a distance in front of a concave shield (8), an incandescent surface (10) consisting of a metallic grid or a perforated metal sheet, in which the mouth of the tube (2) is located at the centre of the shield (8) and at right-angles to the clamped surface of the shield (8), in which a burner head (20) having an end surface and a lateral surface is attached at the mouth of the tube (2), and in which a metal grid (10) which constitutes the incandescent surface and extends up to the edge (11) of the shield (8) is located at a distance in front of the burner head (20), characterized in that the tube (2) is in the form of a Venturi tube, that the burner head (20) consists of at least two concentric heat-resistant nets (13, 14) which face each other, of which the inner net (13) has a finer mesh than the outer net (14), that the end surface of the burner head (20) is closed by at least two nets (17) which are next to each other and correspond to the cylindrical nets (13, 14) in composition and structure, and that, at right-angles to the central axis of the burner head (20) and at a distance apart, there are two flanges (15), of which one is in contact with the end nets (17) and has a few openings (15a), and of which the second is located approximately in the middle of the burner head (20) and likewise has openings (15b), the total cross-sectional area of which, however, is larger than that in the end flange (15).

Abstract (de)

Ein Gasbrenner zum Erzeugen von Infrarotstrahlen, der ein in der Mittelachse eines konvexen Schirmes (8) liegendes Venturirohr (2) zum Zuführen des brennbaren Gas-Luft-Gemisches besitzt und am vorderen Ausgangsende des Venturirohres (2) einen zylindrischen Brennkopf (20) aufweist. Der Brennkopf (20) besitzt als wesentliche Bestandteile zwei zylindrische und konzentrisch zueinander liegende Drahtnetze (13, 14), von denen das innere eine feinere Maschenteilung besitzt als das äußere, um einen Rückschlag der Flammen zu verhindern. Im Brennkopf (20) eingesetzte Flansche (15) sorgen dafür, daß das Gas im wesentlichen radial in eine Brenn- und Verteilerkammer (19) und vergleichsweise hoher Durchtrittsgeschwindigkeit aus dem Brennkopf (20) heraustritt und in Form einer Korona mit sehr hoher Temperatur und Gasausbeute verbrennt. Mit genügend Abstand vor dem Brennkopf (20) erstreckt sich ein grobmaschiges, hitzebeständiges, die Glühfläche bildendes Metallgitter oder Lochblech (10) in leicht konvexer Wölbung bis zum Rand des Schirmes (8), wo beide Teile mit Hilfe eines Rahmens (11) zusammengehalten werden.

IPC 1-7

F23D 13/14; F24C 3/04

IPC 8 full level

F23D 14/14 (2006.01); **F24C 3/04** (2006.01)

CPC (source: EP)

F23D 14/145 (2013.01); **F23D 14/148** (2021.05); **F23D 14/62** (2013.01); **F24C 3/042** (2013.01); F23D 2203/1012 (2013.01); F23D 2900/11401 (2013.01)

Citation (search report)

DE 2606745 A1 19770901 - BAUMANNS HERBERT

Cited by

GB2210965B; JPWO2018122948A1; EP0255472A3; EP0382286A3; FR2642821A1; US11041618B2; EP3531797B1

Designated contracting state (EPC)

FR GB NL

DOCDB simple family (publication)

EP 0035797 A1 19810916; **EP 0035797 B1 19840704**; DE 3109082 A1 19820311; DE 3109145 A1 19830908; DE 8106837 U1 19810903; FR 2478266 A1 19810918; IT 1141852 B 19861008; IT 8085533 A0 19800312

DOCDB simple family (application)

EP 81101800 A 19810311; DE 3109082 A 19810310; DE 3109145 A 19810311; DE 8106837 U 19810311; FR 8104996 A 19810312; IT 8553380 A 19800312