

## Title (en)

A filtering-bed burner and a gas combustion method carried out by it

## Title (de)

Filterbettbrenner und damit durchgeführtes Gasverbrennungsverfahren

## Title (fr)

Brûleur à lit filtrant et procédé de combustion de gaz réalisé par ce dispositif

## Publication

**EP 0892213 A1 19990120 (EN)**

## Application

**EP 97830358 A 19970716**

## Priority

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## Abstract (en)

A filtering-bed burner is described which comprises two concentric holding nets (9, 10) between which a space filled with granular elements of irregular shape (8) made of crystallized silicon dioxide is defined, said granular elements having a particle size included between 2.5 and 7 mm and defining a filtering bed (3) of a thickness included between 10 and 20 mm. An inlet header (4) and a closing element (5) are associated with the opposite ends of the filtering bed (3) and fastened to the corresponding edges of the holding nets (9, 10). The closing element (5) has a connecting portion (6) of the same form and size as the inlet header and a closing wall (7) axially delimiting a pre-mixing chamber (2) defined within the filtering bed. A hyperstoichiometric air-gas mixture is conveyed to the pre-mixing chamber (2) at a flow rate adapted to determine a specific flame power that can be modulated between about 25 W/cm<sup>2</sup> and 350 W/cm<sup>2</sup>. <IMAGE>

## IPC 1-7

**F23D 14/02**; **F23D 14/46**

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## Citation (applicant)

- US 3322179 A 19670530 - GOODELL PAUL H
- US 3947233 A 19760330 - SUNDBERG CARL AXEL
- US 5591095 A 19970107 - WU CHIA-LONG [TW]

## Citation (search report)

- [XY] GB 166554 A 19210922 - ERICH GRUENBAUM
- [Y] EP 0542074 A2 19930519 - LUEDI ROGER [CH]
- [Y] DE 9201313 U1 19920326
- [A] DE 8807395 U1 19880721
- [A] DE 401837 C 19240909 - SI DA DEUTSCHE GASGLUEHLICHT I
- [A] US 5147201 A 19920915 - XIONG TIAN-YU [US]
- [A] FR 2057802 A5 19710521 - CAV LTD
- [Y] PATENT ABSTRACTS OF JAPAN vol. 003, no. 065 (M - 061) 6 June 1979 (1979-06-06)

## Cited by

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