

Title (en)

Post-firing burner for natural gas and lean gases with a high efficiency and a low emission of nitrogen oxides

Title (de)

Nachverbrennungs-Brenner für Erdgas und niederkalorische Gase mit hoher Effizienz und geringen Stickstoffoxidemissionen

Title (fr)

Brûleur de post-combustion pour gaz naturel et gaz pauvres avec une grande efficacité et une faible émission d'oxydes d'azote

Publication

EP 2045523 A1 20090408 (EN)

Application

EP 07425613 A 20071002

Priority

EP 07425613 A 20071002

Abstract (en)

A post-firing burner unit comprising at least one fuel gas delivery pipe (4) placed crosswise with respect to the flow (F) of the oxidising gas in the feed duct (1) of a heat recovery steam generator, with at least one row of fuel gas injector nozzles (6) distributed along the delivery pipe. The burner also comprises: first fuel gas deflector means (7,10) for diverting the fuel gas flow coming from the nozzles (6) in a direction substantially orthogonal to the axis of the burner, the first deflector means (7,10) being attached to the fuel gas delivery pipe (4) in front of the injector nozzles (6); second oxidising gas deflector means (14,18) extending around a part of the delivery pipe (4) and terminating at symmetrically opposite ends of the first deflector means (7,10). The second deflector means divide the oxidising gas flow into a first fraction (F1) for mixing with the flow of fuel gas coming from the first deflector means (7,10) inside at least one first mixing region (P) inside the burner, where a premixed flow of fuel gas and oxidising gas is formed, and a second fraction (F2) for mixing with the premixed flow in at least one second mixing region (C) downstream of the burner.

IPC 8 full level

F23D 14/20 (2006.01)

CPC (source: EP)

F23D 14/20 (2013.01)

Citation (applicant)

- US 4737100 A 19880412 - SCHNELL EARL W [US], et al
- US 4767319 A 19880830 - VOSPER RALPH R [US]
- US 6929470 B1 20050816 - LIFSHITS VLADIMIR [US], et al
- US 6301875 B1 20011016 - BACKLUND JONATHAN C [US], et al
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- US 4869665 A 19890926 - COPPIN WILLIAM [US]
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Citation (search report)

- [A] US 3649211 A 19720314 - VOSPER RALPH B
- [A] US 3732059 A 19730508 - GOODNIGHT H, et al
- [AD] US 4767319 A 19880830 - VOSPER RALPH R [US]

Cited by

DE102017113308A1; US9222410B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

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DOCDB simple family (publication)

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