

Title (en)

Process and installation for reducing by recombustion of nitric oxides in exhaust gases from a primary combustion in a furnace

Title (de)

Verfahren und Anlage zum Reduzieren mittels Wiederverbrennung der Stickoxide in Abgasen einer Primärverbrennung in einem Ofen

Title (fr)

Procédé de réduction, par recombustion des oxydes d'azote contenus dans les fumées issues d'une combustion primaire réalisée dans un four, et installation pour sa mise en oeuvre.

Publication

EP 0809067 A1 19971126 (FR)

Application

EP 97400984 A 19970430

Priority

FR 9606293 A 19960521

Abstract (en)

The reduction of oxides of nitrogen contained in furnace smoke is carried out by recombustion of the smoke, using a secondary fuel injected into a recombustion zone in at least two jets at relatively high and relatively low pressure respectively. The low-pressure jet is situated outside and concentrically with the high-pressure jet. The secondary fuel is a gas at a pressure of a few millibars to a few hundred millibars for the low pressure jet, and a few hundred millibars to a few bars to the high-pressure one. The pressure and flow of the gas in the two jets are regulated according to the dimensions of the recombustion zone and the characteristics of the smoke. The recombustion zone is also subjected to acoustic waves at a frequency of below some 32 Hz. The procedure is carried out in a recombustion zone (B) fed with secondary fuel through two coaxial inlets (2,2') equipped with pressure regulators (4,5). One wall of the recombustion zone is equipped with an acoustic wave generator (6) to homogenise the mixture inside the zone.

Abstract (fr)

Procédé de réduction des oxydes d'azote contenus dans les fumées issues d'une combustion primaire (A), dans un four, par recombustion. Elle concerne également une installation pour la mise en oeuvre de ce procédé. Le procédé selon l'invention est caractérisé en ce qu'on injecte un combustible secondaire dans la zone de recombustion (B) dudit four, suivant au moins deux jets (2,2') associés à pression relativement haute et relativement basse, respectivement. L'invention trouve application dans le domaine de l'épuration des fumées, issues d'une combustion primaire.
<IMAGE>

IPC 1-7

F23C 6/04

IPC 8 full level

F23C 6/04 (2006.01); **F23N 1/00** (2006.01)

CPC (source: EP)

F23C 6/047 (2013.01); **F23C 2201/101** (2013.01)

Citation (search report)

- [A] EP 0159492 A2 19851030 - STEAG AG [DE]
- [A] US 5181475 A 19930126 - BREEN BERNARD P [US], et al
- [A] US 4779545 A 19881025 - BREEN BERNARD P [US], et al
- [A] EP 0182063 A2 19860528 - STEINMUELLER GMBH L & C [DE]
- [A] EP 0512156 A1 19921111 - ENTE NAZ ENERGIA ELETTRICA [IT]
- [A] PATENT ABSTRACTS OF JAPAN vol. 9, no. 29 (M - 356) 7 February 1985 (1985-02-07)
- [A] PATENT ABSTRACTS OF JAPAN vol. 95, no. 001

Cited by

FR2834774A1; NL2001797C2; WO9908045A1; WO2010008280A1

Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0809067 A1 19971126; EP 0809067 B1 20000830; AT E195999 T1 20000915; CZ 135297 A3 19971217; DE 69702950 D1 20001005; DE 69702950 T2 20010329; ES 2152070 T3 20010116; FR 2749066 A1 19971128; FR 2749066 B1 19980821; HU 9700845 D0 19970630; HU P9700845 A1 20000528; PL 320054 A1 19971124; PT 809067 E 20010228; SI 0809067 T1 20010430; SK 55397 A3 19980114

DOCDB simple family (application)

EP 97400984 A 19970430; AT 97400984 T 19970430; CZ 135297 A 19970502; DE 69702950 T 19970430; ES 97400984 T 19970430; FR 9606293 A 19960521; HU P9700845 A 19970505; PL 32005497 A 19970519; PT 97400984 T 19970430; SI 9730090 T 19970430; SK 55397 A 19970502