

Title (en)

METHOD AND BURNER FOR REDUCING NITROGEN OXIDE EMISSIONS DURING THE COMBUSTION OF A GASEOUS FUEL

Title (de)

VERFAHREN UND BRENNER ZUR VERRINGERUNG VON STICKOXIDEMISSIONEN BEI DER VERBRENNUNG EINES GASFÖRMIGEN BRENNSTOFFES

Title (fr)

PROCEDE ET BRULEUR POUR REDUIRE L'EMISSION D'OXYDE D'AZOTE LORS DE LA COMBUSTION D'UN COMBUSTIBLE GAZEUX

Publication

EP 3084298 A1 20161026 (FR)

Application

EP 14833213 A 20141216

Priority

- FR 1362792 A 20131217
- IB 2014066971 W 20141216

Abstract (en)

[origin: WO2015092682A1] The invention relates to a method for reducing nitrogen oxide NO_x emissions during the combustion of a gaseous fuel in a burner (10') intended for a naked-flame or controlled-atmosphere reheating furnace, for reheating steel products or for continuous coating and/or annealing of metal strips, in particular of steel, according to which a first dilution is carried out by mixing combustion air (7) with combustion products (9) upstream from the burner or in the body of the burner, and a second dilution is carried out directly at the level (A) at which the gaseous fuel reacts with the combustion air, mixing the fuel with a recirculated portion of the flame or the products of partial combustion, said double dilution enabling the physical and chemical properties of the gas to be modified in order for the burner to operate with low oxygen rates such as to obtain a flame that produces a very low level of NO_x production regardless of the temperature of the enclosure in which the combustion takes place.

IPC 8 full level

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Citation (search report)

See references of WO 2015092682A1

Citation (examination)

- KR 100810033 B1 20080307 - KOREA IND TECH INST [KR]
- US 2003054303 A1 20030320 - RABOVITSER IOSIF K [US], et al
- WO 2005080869 A1 20050901 - LBE FEUERUNGSTECHNIK GMBH [DE], et al

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DOCDB simple family (application)

FR 1362792 A 20131217; CN 201490001272 U 20141216; EP 14833213 A 20141216; IB 2014066971 W 20141216; US 201415104779 A 20141216