Title (en)

A LOW NOX BURNER

Title (de)

BRENNER MIT NIEDRIGEM NOX-GEHALT

Title (fr)

BRÛLEUR À FAIBLE NOX

Publication

EP 3232133 A1 20171018 (EN)

Application

EP 17165975 A 20170411

Priority

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Abstract (en)

This present invention relates to an efficient environmentally friendly burner: a low NO x (nitrogen oxide) burner that uses premixed air and gas as fuel and water as medium of heat transfer. Premixed air and gas in this device provides heat for boiler through stabilized combustion. The device consists of burner ports, flame stabilizers, upper and lower water chambers, and a mixing chamber. The burner ports are formed by a number of rectangular tubes with gaps in between that function as passageway for air and gas. The premixed air and gas are equally delivered from the mixing chamber to those gaps and combust as they flow through. Circulation channels for cooling water are designed inside the burner ports and the flame stabilizer to effectively prevent the flashback of flame as well as lower the combustion temperature. A minimized formation of NO x is therefore achieved. The low NO x burner according to the present invention is simple in structure and convenient to use. Compared with traditional premix combustion systems, this device guarantees combustions that are more stable, and it is much less likely to cause flashback of flame or blockage.

IPC 8 full level

F24H 1/40 (2006.01); **F23D 14/70** (2006.01)

CPC (source: EP)

F23D 14/70 (2013.01); F23D 2900/11401 (2013.01)

Citation (search report)

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CN110631260A

Designated contracting state (EPC)

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