

Title (en)

Ultra low NOx burner for process heating

Title (de)

Brenner für Prozessheizung mit sehr niedrigem NOx Ausstoss

Title (fr)

Brûleur pour chauffage de procédé à très faible émission de NOx

Publication

EP 1335163 A1 20030813 (EN)

Application

EP 03001381 A 20030127

Priority

- US 6259702 A 20020131
- US 6745002 A 20020205

Abstract (en)

An ultra low NOx burner for process heating is provided which includes a fluid based flame stabilizer which provides a fuel-lean flame at an equivalence ratio in the range of $\phi = 0.05$ to $\phi = 0.3$ and fuel staging lances surrounding the flame stabilizer in circular, flat, or load shaping profiles, each lance comprising a pipe having a staging nozzle at a firing end thereof, each lance having at least one hole for staging fuel injection, and each hole having a radial divergence angle and an axial divergence angle. The at least one hole and the divergence angles provide circular, flat or load shaping flame pattern. The burner provides NOx emissions of less than 9 ppmv at near stoichiometry combustion conditions. <IMAGE>

IPC 1-7

F23C 9/00; **F23D 14/22**

IPC 8 full level

F23C 5/32 (2006.01); **F23C 6/04** (2006.01); **F23D 14/22** (2006.01); **F23D 14/58** (2006.01); **F23M 5/02** (2006.01)

CPC (source: EP)

F23C 5/32 (2013.01); **F23C 6/047** (2013.01); **F23D 14/22** (2013.01); **F23D 14/58** (2013.01); **F23M 5/025** (2013.01); **F23C 2201/20** (2013.01); **F23C 2202/40** (2013.01); **F23D 2900/00011** (2013.01)

Citation (applicant)

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- US 5275552 A 19940104 - SCHWARTZ ROBERT E [US], et al
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Citation (search report)

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