

Title (en)
FUEL COMBUSTION DEVICE AND METHOD

Title (de)
VORRICHTUNG UND VERFAHREN ZUM VERBRENNEN VON BRENNSTOFF

Title (fr)
PROCEDE ET DISPOSITIF DE COMBUSTION D'UN COMBUSTIBLE

Publication
EP 0961905 A1 19991208 (DE)

Application
EP 98907987 A 19980124

Priority
• DE 19704802 A 19970208
• EP 9800398 W 19980124

Abstract (en)
[origin: US6193502B1] The fuel is fed centrally into a fire tube (3), where it is mixed with combustion air in a combustion zone. The air exits through first and second air line nozzles (4 or 5) which are arranged in two directly adjoining rows (6, 7) and inclined in the direction of counterflow at an angle of 60° to the axis of the fire tube. The distance (x) between the fuel nozzle (9) and the openings of the first air line nozzles (4) is 0.70 times the diameter of the fire tube. In addition, the second air line nozzles (5) extend into the fire tube by a distance (y) which is 0.17 times the diameter of the fire tube. The total cross-section of the second air line nozzles (5) is 0.6 times that of the first air line nozzles (4). A highly turbulent toroidal eddy forms inside the fire tube (3) which generates a very homogeneous mixture across the cross-section of said fire tube (3). This results in lower NO_x values and even temperature distribution already inside the fire tube.

IPC 1-7
F23D 14/22

IPC 8 full level
F23D 14/22 (2006.01)

CPC (source: EP US)
F23D 14/22 (2013.01 - EP US); **F23D 2206/10** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB IE IT LI NL SE

DOCDB simple family (publication)
US 6193502 B1 20010227; AT E207593 T1 20011115; AU 6616098 A 19980826; CA 2280169 A1 19980813; CZ 262799 A3 20000412; CZ 292330 B6 20030917; DE 19704802 A1 19980813; DE 59801858 D1 20011129; EA 000904 B1 20000626; EA 199900730 A1 20000228; EP 0961905 A1 19991208; EP 0961905 B1 20011024; ES 2163257 T3 20020116; HU P0001053 A2 20010428; HU P0001053 A3 20010528; NO 993801 D0 19990806; NO 993801 L 19990915; SK 106399 A3 20000612; WO 9835184 A1 19980813

DOCDB simple family (application)
US 36720599 A 19991122; AT 98907987 T 19980124; AU 6616098 A 19980124; CA 2280169 A 19980124; CZ 262799 A 19980124; DE 19704802 A 19970208; DE 59801858 T 19980124; EA 199900730 A 19980124; EP 9800398 W 19980124; EP 98907987 A 19980124; ES 98907987 T 19980124; HU P0001053 A 19980124; NO 993801 A 19990806; SK 106399 A 19980124