Title (en)
Burner with lamella

Title (de)
Lamellenbrenner

Title (fr)
Brûleur a lamelles

Publication
EP 1099907 A1 20010516 (DE)

Application
EP 00123595 A 20001028

Priority
DE 19954811 A 19991113

Abstract (en)
The ends of at least one part of the parallel lamellas (10) end in connecting fitments (11) fitting into holders (21) on the burner frame (20). The lamellas are cooled by a serpentine pipe which is in sections across the lamellas and are joined to them and have cooling fluid flowing through them. The lamellas are made of aluminum, copper alloy or ferrite refined steel, and the burner frames made of ferrite refined steel.

Abstract (de)
Die Erfindung betrifft einen Lamellenbrenner mit einem Brennerdeck mit einem Brennerrahmen (20), der mit mehreren, parallel ausgerichteten Lamellen (10) verbunden ist, und mit einer die Lamellen kühlenden Rohrschlange (30), deren Rohrabschnitte quer zu den Lamellen geführt, mit diesen verbunden und von Kühlflüssigkeit durchflossen sind. Durch Verwendung einer Verbindungstechnik ohne thermischen Prozess kann die Verbindung der Lamellen (20) mit dem Brennerrahmen (10) mechanisch fest und gut wärmeleitend wesentlich kostengünstiger ausgeführt werden. <IMAGE>

IPC 1-7 (main, further and additional classification)
F23D 14/78

IPC 8 full level (invention and additional information)
F23D 14/58 (2006.01); **F23D 14/78** (2006.01)

CPC (invention and additional information)
F23D 14/78 (2013.01); **F23D 14/583** (2013.01); F23D 2212/20 (2013.01); F23D 2213/00 (2013.01)

Citation (search report)
- [XY] DE 19724817 A1 19971211 - VAILLANT JOH GMBH & CO [DE]
- [Y] DE 19641040 A1 19980423 - BOSCH GMBH ROBERT [DE]
- [A] EP 0913635 A2 19990506 - BOSCH GMBH ROBERT [DE]
- [A] EP 0913632 A2 19990506 - BOSCH GMBH ROBERT [DE]
- [A] DE 9110246 U1 19911010
- [A] GB 2262336 A 19930616 - POLIDORO ALDO [IT]
- [A] DE 29702913 U1 19970403 - VAILLANT JOH GMBH & CO [DE]

Designated contracting state (EPC)
DE ES FR GB IT NL

EPO simple patent family
EP 1099907 A1 20010516; EP 1099907 B1 20040922; DE 19954811 A1 20010517

INPADOC legal status

2018-07-31 [PG25 DE] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : DE
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20180501

2018-05-01 [REG DE R119] APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON-PAYMENT OF RENEWAL FEE
- Document : DE 50007871

2017-01-31 [PGFP DE] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : DE
- Payment date : 20161213
- Year of fee payment : 17

2013-08-30 [PG25 FR] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : FR
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20121031

2013-08-30 [PG25 IT] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : IT
- Free text : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES
- Effective date : 20121028

2013-07-26 [REG FR ST] NOTIFICATION OF LAPSE
- Effective date : 20130628

2012-08-23 [REG DE R084] DECLARATION OF WILLINGNESS TO LICENCE
- Document : DE 50007871
- Effective date : 20120626

2012-01-31 [PGFP FR] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : FR
- Payment date : 20111103
- Year of fee payment : 12

2011-03-31 [PGFP IT] POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE
- Ref Country Code : IT
- Payment date : 20101030
- Year of fee payment : 11

2005-09-14 [26N] NO OPPOSITION FILED
- Effective date : 20050623

2005-08-05 [ET] FR: TRANSLATION FILED

2005-04-20 [GBV] GB: EP PATENT (UK) TREATED AS ALWAYS HAVING BEEN VOID IN ACCORDANCE WITH GB SECTION 77(7)/1977
- Effective date : 20040922

2005-04-01 [NLV1] NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT

2005-01-02 [PG25 ES] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : ES
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20050102

2004-10-28 [REF] CORRESPONDS TO:
- Document : DE 50007871 P 20041028

2004-09-22 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : B1
- Designated State(s) : DE ES FR GB IT NL

2004-09-22 [REG GB FG4D] EUROPEAN PATENT GRANTED
- Free text : NOT ENGLISH

2004-09-22 [PG25 GB] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : GB
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20040922

2004-09-22 [PG25 NL] LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO
- Ref Country Code : NL
- Free text : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT
- Effective date : 20040922

2002-02-13 [AKX] PAYMENT OF DESIGNATION FEES
- Free text : DE ES FR GB IT NL

2002-01-16 [17P] REQUEST FOR EXAMINATION FILED
- Effective date : 20011116

2001-05-16 [AK] DESIGNATED CONTRACTING STATES:
- Kind Code of Ref Document : A1
- Designated State(s) : DE ES FR GB IT NL

2001-05-16 [AX] REQUEST FOR EXTENSION OF THE EUROPEAN PATENT TO:
- Free text : AL;LT;LV;MK;RO;SI