

(19)



(11)

**EP 3 480 543 A3**

(12)

**EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**21.08.2019 Bulletin 2019/34**

(51) Int Cl.:  
**F27B 3/20 (2006.01) F27D 99/00 (2010.01)**

(43) Date of publication A2:  
**08.05.2019 Bulletin 2019/19**

(21) Application number: **18193974.5**

(22) Date of filing: **12.09.2018**

(84) Designated Contracting States:  
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR**  
Designated Extension States:  
**BA ME**  
Designated Validation States:  
**KH MA MD TN**

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(30) Priority: **03.11.2017 US 201715803223**

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(54) **BURNER HOUSING**

(57) A burner housing, comprising: an internal cartridge housed in an external housing; wherein the internal cartridge defines a plurality of ports selected from the group consisting of: an inlet cooling fluid port, an outlet cooling fluid port; a burner port; particle injection port; a

cooling fluid circuit defined by and/or disposed in the internal cartridge and/or the external housing; and wherein the internal cartridge is made of a first material and the external housing is made from a second material.

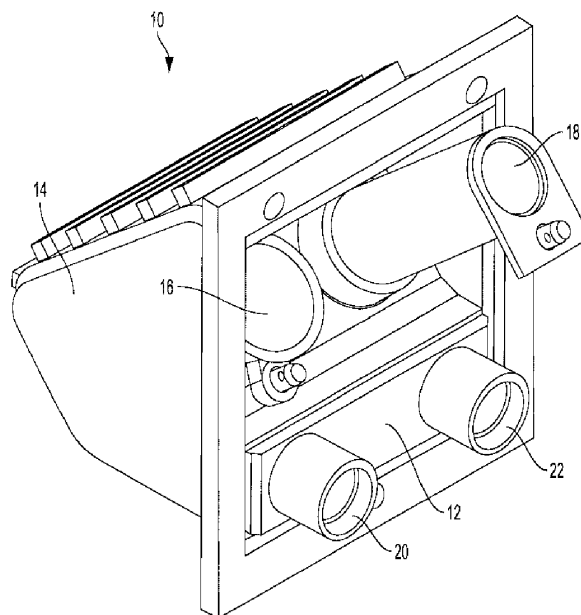


FIG. 1

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## EUROPEAN SEARCH REPORT

Application Number  
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search <b>Munich</b>		Date of completion of the search <b>12 July 2019</b>	Examiner <b>Gavriliu, Alexandru</b>
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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EPO FORM 1503 03.82 (P04C01)



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**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION**  
**SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1, 2

a burner housing comprising:

- an internal cartridge defining a plurality of ports, selected from the group of inlet and outlet ports, a burner port or particle injection port, and housed in an external housing,
- a cooling fluid circuit defined/disposed in the internal cartridge/external housing, wherein the internal cartridge is made of a first material (steel) and the external housing is made of another material (copper)

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2. claims: 3-11

a fluid cooled burner housing comprising:

- inlet and outlet fluid ports, and
- a cooling fluid circuit comprising a plurality of cooling panels, each cooling panel housing an individual cooling fluid circuit with an inlet and outlet in fluid communication with a manifold, wherein
- said manifold is also in fluid communication with the inlet and outlet fluid ports of the burner housing.

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

