

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**
(PCT Rule 43*bis*.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IB2016/053942

International filing date (day/month/year)
30.06.2016

Priority date (day/month/year)
30.06.2015

International Patent Classification (IPC) or both national classification and IPC
INV. F23R3/16 F23R3/28 F23R3/34 F23R3/54 F23R3/14

Applicant
ANSALDO ENERGIA IP UK LIMITED

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application


2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of this opinion

see form
PCT/ISA/210

Authorized Officer

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - the international application in the language in which it was filed.
 - a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. forming part of the international application as filed:
 - in the form of an Annex C/ST.25 text file.
 - on paper or in the form of an image file.
 - b. furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. furnished subsequent to the international filing date for the purposes of international search only:
 - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>4-6, 10, 13, 15-18, 20</u>
	No: Claims	<u>1-3, 7-9, 11, 12, 14, 19</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-20</u>
Industrial applicability (IA)	Yes: Claims	<u>1-20</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re ITEM VIII

- 1 Independent claims 11 and 19 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined.
- 1.1 Independent claims 11 (and its dependent claims) and 19 (and its dependent claims) comprise all the features of claim 1 and are therefore not appropriately formulated as claims dependent on the latter (Rule 6.4 PCT).
- 1.2 The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Re Item V

- 2 Reference is made to the following documents:
- | | |
|----|---|
| D1 | US 2006/150634 A1 (OUMEJJOUD KHALID [US] ET AL) 13 July 2006 (2006-07-13) |
| D2 | US 2014/090396 A1 (STUTTAFORD PETER JOHN [US] ET AL) 3 August 2014 (2014-04-03)cited in the application |
| D3 | WO 01/55646 A1 (HONEYWELL INT INC [US]) 2 August 2001 (2001-08-02) |
| D4 | US 2004/123653 A1 (BENSON KELLY J [US]) 1 July 2004 (2004-07-01) |

Independent Claim 1

- 3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.
- 3.1 Document D1 discloses (cf; para. 15-0020 and figures 1-8):
- A fuel cartridge assembly (fig. 1), comprising:
 - a centerbody (fig. 2) comprising:
 - an aft portion (12) comprising at least a first fuel manifold (14) and a second fuel manifold (fig. 2);
 - a main body extending from the aft portion and having a first passageway contained therein;

a plurality of fuel passages (fig. 6) extending axially from the aft portion to a tip plate (20), each fuel passage of the plurality of fuel passages in communication with the first fuel manifold or the second fuel manifold; and
the tip plate coupled to an end of the main body opposite the aft portion, the tip plate having at least one ignition opening (25) and a plurality of openings corresponding to the plurality of axially extending fuel passages (fig. 6).

Therefore all the technical features of claim 1 are known from D1.

Independent Claims 11 and 19

- 4 These claims contain all features of claim 1 and should be formulated as dependent on claim 1 (see Section VIII).

Dependent Claims 2-20

- 4.1 Dependent claims 2-20 do not appear to contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty or inventive step. The reasons are as follows:

The features of dependent claims 2,3,7-9,11-12, 14 and 19 are disclosed; see D1 (cf; para. 15-0020 and figures 1-8).

In claims 4-6,10, 13, 15-18 and 20 light constructional changes in the combustion system of claim 1 are defined which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of these claims lack an inventive step.

INDUSTRIAL APPLICABILITY

- 5 Claims 1 to 20 fulfil PCT requirements with respect to industrial Applicability (Article 33(4) PCT)