

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
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International application No. PCT/T2007/000144

International filing date (day/month/year) 28.02.2007
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Priority date (day/month/year) 28.02.2006
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International Patent Classification (IPC) or both national classification and IPC INV. C01B3/00 H01L23/26
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Applicant SAES GETTERS S.P.A

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 or 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.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016

Date of completion of this opinion See form PCT/ISA/210
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IT2007/000144

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. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
- a. type of material:
- a sequence listing
 - table(s) related to the sequence listing
- b. format of material:
- on paper
 - in electronic form
- c. time of filing/furnishing:
- contained in the international application as filed.
 - filed together with the international application in electronic form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. II Priority

1. The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43*bis*.1 and 64.1) is the claimed priority date.
2. This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

see separate sheet

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, 5</u>
	No: Claims	<u>1-3, 6-11</u>
Inventive step (IS)	Yes: Claims	
	No: Claims	<u>1-11</u>
Industrial applicability (IA)	Yes: Claims	<u>1-11</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43bis.1 and 70.10)

and /or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

see form 210

Re Item II

Priority

1. The present application does not have a right to the priority claimed from IT MI2006A000361 for claims 1 to 3, 6 to 11.

The present application claims priority from IT MI2006A000361 of 28.02.2006. Article 8(2)(a) PCT refers to Article 4 of the Paris Convention for the conditions of a priority claim. From Article 4(c)(1) and (2) of the Paris Convention it is clear that within twelve months of a *first* application a further application can be filed having the right to priority.

In the present case, IT MI2006A000361 is not the *first* application for the subject-matter. WO-A-2006/057020 is an application from the same applicant. This application has been filed 18.11.2005 and claims a priority of 23.11.2004. This application discloses exactly the same alloys as used in the present application. On the first page of the description, it is disclosed that these alloys can be used in the absorption of hydrogen from containers under high vacuum conditions, or in the presence of inert gases.

For this subject-matter, IT MI2006A000361 was therefore not the first application. Claims 1 to 3, 6 to 11 of the present application, therefore, do not enjoy the right to priority.

Claims 4 and 5 do have right to priority, since WO-A-2006/057020 does not disclose an inert gas flow of claim 4 nor does it disclose the specific inert gases of claim 5.

As a result of the invalid priority for claims 1-3, 6-11, the effective date of these claims is the filing date. WO-A-2006/057020 must therefore be considered as comprised in the state of the art as defined in Rule 64.1 PCT.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability;

citations and explanations supporting such statement

Reference is made to the following documents:

- D1: WO 2006/057020 A (GETTERS SPA [IT]; CODA ALBERTO [IT]; GALLITOGNOTTA ALESSANDRO [IT]; CA) 1 June 2006 (2006-06-01)
- D2: WO 2004/024965 A (GETTERS SPA [IT]; GALLITOGNOTTA ALESSANDRO [IT]; TOIA LUCA [IT]; BOFFI) 25 March 2004 (2004-03-25)
- D3: WO 01/92590 A (GETTERS SPA [IT]; TOIA LUCA [IT]; BOFFITO CLAUDIO [IT]) 6 December 2001 (2001-12-06)
- D4: GB-A-1 248 184 (WESTINGHOUSE ELECTRIC CORP [US]) 29 September 1971 (1971-09-29) cited in the application

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-3, 6-11 is not new in the sense of Article 33(2) PCT.
 - 1.1. As explained above, document D1 is comprised in the state of the art as defined in Rule 64.1 PCT. This document discloses exactly the same non-evaporable getter alloy. The polygon within the ternary diagram defined in D1 is identical to the one presently claimed. The alloys can be used for hydrogen sorption inside containers that are either kept under vacuum or are filled with a gas atmosphere (see page 1, line 3 - page 2, line 7; claims).

The subject-matter of claims 1-3, 6-11 is not new.

- 1.2. Document D2 discloses getter compositions that can be used in hydrogen absorption. In claim 6 a composition of 76.7% zirconium, 16.4% vanadium, 3.6% iron and 3.3% of component A. From claim 5 it is clear that component A is chosen from yttrium, lanthanum and rare earths. From claim 1 it is clear that M could be only iron. The materials are used to maintain vacuum in X-ray generating tubes, flat displays and thermal insulation. Alternatively, the can be employed to remove hydrogen when present in other gases, as for example noble gases. An example of the latter application is in fluorescent lamps. (see claims 1, 5, 6; page 1, line 5-26).

The choice of yttrium from the list of yttrium, lanthanum and rare earths is the choice from one list, which is considered not novel.

The subject-matter of claims 1-3, 6 and 11 is not novel.

2. The subject-matter of claims 4, 5 and 7-10 does not involve an inventive step.
 - 2.1. D2 discloses absorption in presence of noble gases. The fact that these gases are flowing cannot render claim 4 inventive.
 - 2.2. The choice of argon and helium as specific noble gases does also not involve an inventive step. The subject-matter of claim 5 does not involve an inventive step.
 - 2.3. The specific compositions of claims 7-10 do not show any technical effect over the compositions of D2. For the person skilled in the art trying to solve the problem of finding an alternative composition for absorbing hydrogen, these compositions are obvious.

Re Item VI

Certain documents cited

Certain published documents

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO-2006/057020	01.06.2006	18.11.2005	23.11.2004