

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

|  |  |   |                  |
|--|--|---|------------------|
| Applicant's or agent's file reference<br>4165-16-WO  | <b>FOR FURTHER ACTION</b>  |   | See item 4 below |
| International application No.<br>PCT/EP2004/001652   | International filing date ( <i>day/month/year</i> )<br>20 February 2004 (20.02.2004) | Priority date ( <i>day/month/year</i> )<br>08 March 2003 (08.03.2003) |                  |
| International Patent Classification (8th edition unless older edition indicated)<br>See relevant information in Form PCT/ISA/237 |  |   |                  |
| Applicant<br>INA-SCHAEFFLER KG   |  |   |                  |

|   |                                     |   |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
|---|-------------------------------------|---|---------------------|-------------------------------------|------------|----------|--------------------------|-------------|--|--------------------------|------------|----------------------------|-------------------------------------|-----------|---|--------------------------|------------|-------------------------|--------------------------|-------------|--|--------------------------|--------------|---|
| <p>1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.</p>   |                                     |   |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <p>3. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> <p>4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).</p> | <input checked="" type="checkbox"/> | Box No. I   | Basis of the report | <input checked="" type="checkbox"/> | Box No. II | Priority | <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability | <input type="checkbox"/> | Box No. IV | Lack of unity of invention | <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | <input type="checkbox"/> | Box No. VI | Certain documents cited | <input type="checkbox"/> | Box No. VII | Certain defects in the international application | <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |
| <input checked="" type="checkbox"/>   | Box No. I                           | Basis of the report   |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input checked="" type="checkbox"/>   | Box No. II                          | Priority  |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>  | Box No. III                         | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>  | Box No. IV                          | Lack of unity of invention  |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input checked="" type="checkbox"/>   | Box No. V                           | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>  | Box No. VI                          | Certain documents cited   |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>  | Box No. VII                         | Certain defects in the international application  |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |
| <input type="checkbox"/>  | Box No. VIII                        | Certain observations on the international application   |                     |                                     |            |          |                          |             |  |                          |            |                            |                                     |           |   |                          |            |                         |                          |             |  |                          |              |   |

|   |  |
|---|--|
|   | Date of issuance of this report<br>22 February 2006 (22.02.2006) |
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland | Authorized officer<br><br><b>Agnes Wittmann-Regis</b>            |
| Facsimile No. +41 22 740 14 35  | Telephone No. +41 22 338 89 70                                   |

**PATENT COOPERATION TREATY**

**Translation**

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

To:

Date of mailing  
(day/month/year)

Applicant's or agent's file reference  
**4165-16-WO**

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
**PCT/EP2004/001652**

International filing date (day/month/year)  
**20.02.2004**

Priority date (day/month/year)  
**08.03.2003**

International Patent Classification (IPC) or both national classification and IPC

Applicant  
**INA-SCHAEFFLER KG**

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 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/EP

Facsimile No.

Authorized officer

Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/001652

**Box No. I**      **Basis of this 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, unless otherwise indicated under this item.  
 This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 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  
 in written format  
 in computer readable form
  - c. time of filing/furnishing  
 contained in the international application as filed.  
 filed together with the international application in computer readable 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(s) 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:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/001652

Box No. II      Priority

1.  The following document has not yet been furnished:

copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date 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:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/EP2004/001652

| 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)  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Claims</td> <td style="width: 50%; text-align: center;">1-6</td> <td style="width: 40%;"></td> </tr> <tr> <td>_____</td> <td>_____</td> <td style="text-align: right;">YES</td> </tr> <tr> <td>Claims</td> <td>_____</td> <td style="text-align: right;">NO</td> </tr> </table> | Claims | 1-6 |  | _____ | _____ | YES | Claims | _____ | NO |
| Claims  | 1-6  |  |        |     |  |       |       |     |        |       |    |
| _____   | _____  | YES  |        |     |  |       |       |     |        |       |    |
| Claims  | _____  | NO   |        |     |  |       |       |     |        |       |    |
|   | Inventive step (IS)  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Claims</td> <td style="width: 50%; text-align: center;">1-6</td> <td style="width: 40%;"></td> </tr> <tr> <td>_____</td> <td>_____</td> <td style="text-align: right;">YES</td> </tr> <tr> <td>Claims</td> <td>_____</td> <td style="text-align: right;">NO</td> </tr> </table> | Claims | 1-6 |  | _____ | _____ | YES | Claims | _____ | NO |
| Claims  | 1-6  |  |        |     |  |       |       |     |        |       |    |
| _____   | _____  | YES  |        |     |  |       |       |     |        |       |    |
| Claims  | _____  | NO   |        |     |  |       |       |     |        |       |    |
|   | Industrial applicability (IA)  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Claims</td> <td style="width: 50%; text-align: center;">1-6</td> <td style="width: 40%;"></td> </tr> <tr> <td>_____</td> <td>_____</td> <td style="text-align: right;">YES</td> </tr> <tr> <td>Claims</td> <td>_____</td> <td style="text-align: right;">NO</td> </tr> </table> | Claims | 1-6 |  | _____ | _____ | YES | Claims | _____ | NO |
| Claims  | 1-6  |  |        |     |  |       |       |     |        |       |    |
| _____   | _____  | YES  |        |     |  |       |       |     |        |       |    |
| Claims  | _____  | NO   |        |     |  |       |       |     |        |       |    |
| 2. Citations and explanations:  |  |  |        |     |  |       |       |     |        |       |    |
| <p>Reference is made to the following documents:</p> <p>D1: DE 76 23 390 U (KUIGELFISCHER GEORG SCHÄFER &amp; CO) 2<br/>December 1976 (1976-12-02)</p> <p>D2: DE 26 00 955 A (TORRINGTON CO) 22 July 1976 (1976-07-22)</p> <p>Document D1 is regarded as the closest prior art with respect to the subject matter of claim 1. It discloses (the references between parentheses relate to this document) a combined radial and axial bearing, consisting of a row of axially positioned needles or rollers (10) for absorbing a radial load and a row of radially positioned needles or rollers (5) for absorbing an axial load, a bearing ring (1) of the radial bearing and a running disc (11) of the axial bearing being connected to one another in a positive-engaging manner to form a construction unit, the bearing ring of the radial bearing being accommodated at an axial end by a locating bore of the running disc of the axial bearing (see page 3, lines 11 to 14).</p> <p>The subject matter of claim 1 therefore differs from the known combined radial and axial bearing in that the positive engagement is effected by a ring which is arranged between</p> |  |  |        |     |  |       |       |     |        |       |    |

**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

bearing ring and running disc and is designed in such a way as to prevent the bearing ring and running disc from turning relative to one another in the circumferential direction while, however, enabling limited axial displacement.

The subject matter of claim 1 is thus novel (PCT Article 33(2)).

The problem addressed by the present invention can therefore be considered that of connecting a bearing ring of the radial bearing and a running disc of the axial bearing of a combined radial and axial bearing in a positive-engaging manner to form a construction unit in such a way that the axial tolerance fluctuations can be compensated for.

The solution proposed for this problem in claim 1 of the present application is based on an inventive step (PCT Article 33(3)) for the following reasons:

- In the arrangement disclosed in document D1 there is only a temporary connection between the bearing ring of the radial bearing and the running disc of the axial bearing.
- Further solutions known from the prior art (see, e.g., document D2, claim 2) provide connections between the bearing ring of the radial bearing and the running disc of the axial bearing which do not allow axial displaceability of the two parts relative to one another (mechanical locking, welding, adhesive bonding).
- The solution proposed in claim 1 by means of a ring arranged between bearing ring and running disc is neither known from the prior art nor suggested by it.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/001652

**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

Claims 2 to 6 are dependent on claim 1 and thus likewise meet the PCT requirements for novelty and inventive step.

Claims 1 to 6 likewise meet the PCT requirements for industrial applicability (PCT Article 33(4)).