

**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 P 30369/PCT	<b>FOR FURTHER ACTION</b>		See item 4 below
International application No. PCT/EP2017/081268	International filing date ( <i>day/month/year</i> ) 01 December 2017 (01.12.2017)	Priority date ( <i>day/month/year</i> ) 08 December 2016 (08.12.2016)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant ALFING KESSLER SONDERMASCHINEN GMBH			

<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 9 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> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input 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 checked="" 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 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 checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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	Date of issuance of this report 11 June 2019 (11.06.2019)
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From the INTERNATIONAL SEARCHING AUTHORITY

To:

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing <i>(day/month/year)</i> <b>16 March 2018</b>	
Applicant's or agent's file reference <b>P 30369/PCT</b>	<b>FOR FURTHER ACTION</b> See paragraph 2 below
International application No. <b>PCT/EP2017/081268</b>	International filing date <i>(day/month/year)</i> <b>01 December 2017</b>
Priority date <i>(day/month/year)</i> <b>08 December 2016</b>	
International Patent Classification (IPC) or both national classification and IPC <b>B23D 31/00(2006.01)i; B23D 33/08(2006.01)i; F16C 9/04(2006.01)i</b>	
Applicant <b>ALFING KESSLER SONDERMASCHINEN GMBH</b>	

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 43bis.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 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 66.1bis(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/	Date of completion of this opinion	Authorized officer
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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2017/081268

## 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 43*bis*.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 13*ter*.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 13*ter*.1(a)).
    - on paper or in the form of an image file (Rule 13*ter*.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:



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/EP2017/081268****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 Supplemental Box

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2017/081268

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.  
Continuation of:

BOX V.

1. Reference is made to the following documents (D):

D1	EP 1 577 038 A1 (KESSLER KG MASCHF [DE]) 21 September 2005 (2005-09-21)
D2	US 2 916 883 A (GECK DONALD P) 15 December 1959 (1959-12-15)
D3	DE 197 33 433 A1 (KESSLER KG MASCHF [DE]) 18 February 1999 (1999-02-18)
D4	DE 43 02 303 A1 (KLOECKNER HUMBOLDT DEUTZ AG [DE]) 4 August 1994 (1994-08-04)

2. INDEPENDENT CLAIM 1:

Document D1 discloses (the references between parentheses relate to said document):

A fracture-splitting device for fracture-splitting a workpiece, in particular an engine component or a connecting rod (see the abstract),

having an expansion element arrangement for arrangement in a recess of the workpiece, and an expansion drive for actuating at least one expansion element of the expansion element arrangement into an expanded position for severing a separating component of the workpiece, in particular a bearing cover, from a base component of the workpiece, in particular an engine block (see the description, paragraph [0035]),

having a supporting arrangement for supporting the separating component in the direction of the base component, such that the separating component is held on the base component, wherein the supporting arrangement has at least one supporting element having a spring arrangement for the resilient support of the separating component, wherein the at least one supporting element supports the separating component during the severing from the base component and after the severing from the base component (see the parts 11, 12, 13 and 9, 7; see the description, paragraphs [0033], [0034] and [0036]).

The subject matter of claim 1 is therefore not novel (PCT Article 33(3)).

3. DEPENDENT CLAIMS 22 AND 25:

**The combination of features in dependent claim 22 - without "in particular" - together with the additional features of claim 25 are neither known nor obvious from the available prior art.**

4. DEPENDENT CLAIMS 2-21, 23, 24, 26-30:

Dependent claims 2-21, 23, 24 and 26-30 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the EPC in respect of novelty (PCT Article 33(3)) and/or inventive step (PCT Article 33(4)).

Claim 2:

The additional features of dependent claim 2 are known from document D1; see the "cylinders (9)" or the "support cylinders (12)".

Claim 3:

**Supplemental Box**

The additional features of dependent claim 3 are known from document D1; see the "support cylinders (12)" and figures 1 and 2.

## Claim 4:

The invention differs from the prior art merely in the use of well-known equivalents (of the mechanical kind); see also D2: figures 1 and 2.

The subject matter of claim 4 therefore does not involve an inventive step.

## Claim 5:

The additional features of dependent claim 5 are known from document D1 (see paragraph [0014]; see also D2).

## Claim 6:

The invention differs from the prior art merely in the use of well-known equivalents (of the mechanical kind; see also D2).

The subject matter of claim 6 therefore does not involve an inventive step.

## Claim 7:

Dependent claim 7 concerns a minor structural modification of claim 6 of the kind that a person skilled in the art would normally make on the basis of routine considerations; see in this regard for example D3 (see figure 3: parts 54), especially since the resulting advantages are readily foreseeable.

The subject matter of claim 7 therefore does not seem to involve an inventive step either.

## Claim 8:

Dependent claim 8 concerns a minor structural modification of claim 7 of the kind that a person skilled in the art would normally make on the basis of routine considerations; see in this regard for example D3 (see figure 3: parts 54); especially since the resulting advantages are readily foreseeable.

The subject matter of claim 8 therefore does not seem to involve an inventive step either.

## Claims 9-13:

The subject matter of dependent claims 9-13 is a minor structural modification of claim 1 of the kind that a person skilled in the art would normally make on the basis of routine considerations.

## Claims 14-15:

The additional features of dependent claims 14-15 are already known from document D1; see the "cylinders (9)" and the "support cylinders (12)".

## Claim 16:

The additional features of dependent claim 16 are known from document D1; see figures 1 and 2 with the parts 11, 12.

## Claim 17:

The additional features of dependent claim 17 are known from document D1; see [0038]: "transport device" 2.

## Claim 18:

Dependent claim 18 concerns a minor structural modification of the features known from D1 (see: paragraph [0035]) of the kind that a person skilled in the art would normally make on the basis of routine considerations.

See also D4: figure 3.

The subject matter of claim 18 therefore does not seem to involve an inventive step either.

## Claim 19:

**Supplemental Box**

The additional features of dependent claim 19 are known from document D1.

Claim 20:

The additional features of dependent claim 20 are known from document D1.

Claim 21:

Dependent claim 21 concerns a minor structural modification of the features of claim 20 of the kind that a person skilled in the art would normally make on the basis of routine considerations.

The subject matter of claim 21 therefore does not seem to involve an inventive step either.

Claims 23-24:

see Box VIII

The other features of claim 23 are known from D1.

Dependent claim 24 concerns a minor structural modification of the features of claim 23 of the kind that a person skilled in the art would normally make on the basis of routine considerations.

Claim 26:

see Box VIII

The other features of claim 26 are known from D1.

Claim 27:

The additional features of dependent claim 27 are mentioned implicitly in document D1.

See also D4: figure 3.

Claim 28:

Dependent claim 28 concerns a minor structural modification of the features of claim 27 of the kind that a person skilled in the art would normally make on the basis of routine considerations.

The subject matter of claim 28 therefore does not seem to involve an inventive step either.

Claim 29:

Dependent claim 29 concerns a minor structural modification of the features of claim 27 of the kind that a person skilled in the art would normally make on the basis of routine considerations.

The subject matter of claim 29 therefore does not seem to involve an inventive step either.

Claim 30:

The additional features of dependent claim 30 are implicitly mentioned in document D1.

#### 5. INDEPENDENT CLAIM 31:

Document D1 discloses (the references between parentheses relate to said document):

A method for fracture-splitting a workpiece, in particular an engine component or a connecting rod, said method having the following steps:

- arranging an expansion element arrangement of a fracture-splitting device in a recess of the workpiece (see the description, paragraph [0035])
- actuating at least one expansion element of the expansion element arrangement by means of an expansion drive into an expanded position for severing a separating component of the workpiece, in particular a bearing cover, from a base component of the workpiece, in particular an engine block (see the description, paragraph [0035]), and
- supporting the separating component in the direction of the base component by means of a supporting arrangement so that the separating component is held on the base component,



**Supplemental Box**

wherein at least one supporting element of the supporting arrangement resiliently supports the separating component by means of a spring arrangement during the severing from the base component and after the severing from the base component (see the description, paragraphs [0033]-[0036]).

The subject matter of claim 31 is therefore not novel (PCT Article 33(3)).

**6. DEPENDENT CLAIM 32:**

The additional features of dependent claim 32 either are implicitly mentioned in document D1 or concern a minor structural modification of the features of claim 31 of the kind that a person skilled in the art would normally make on the basis of routine considerations.

The subject matter of claim 32 therefore does not seem to involve an inventive step either.

**BOX VIII**

It should be noted that the feature "wherein the separating-supporting device (60) ... support ... jointly" in device claim 23 relates to a method for using the device rather than to a definition of the device in terms of its technical features. The intended restrictions are therefore not clear from this claim (PCT Article 6).

It should be noted that the feature "during the severing ... is arranged" in device claim 24 relates to a method for using the device rather than to a definition of the device in terms of its technical features. The intended restrictions are therefore not clear from this claim (PCT Article 6).

It should be noted that the feature "so that the processing surface ... remains free" in device claim 26 relates to a method for using the device rather than to a definition of the device in terms of its technical features. The intended restrictions are therefore not clear from this claim (PCT Article 6).

Claim 26, by way of the wording in the characterising part "so that the processing surface ... remains free" attempts to define the subject matter of the claim in terms of the result to be achieved. A definition of this kind can only be permitted under the conditions as set forth in the PCT Guidelines 5.35. In the present case, however, wording of this type is inadmissible, since it appears possible to describe the subject matter of the application in a more specific manner, i.e., to state the measures by which the effect can be achieved.