

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 12275/145/062_WO	FOR FURTHER ACTION		See item 4 below
International application No. PCT/EP2018/072863	International filing date (<i>day/month/year</i>) 24 August 2018 (24.08.2018)	Priority date (<i>day/month/year</i>) 05 September 2017 (05.09.2017)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant TRUMPF WERKZEUGMASCHINEN GMBH + CO. 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> <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 10 March 2020 (10.03.2020)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Nora Lindner
Facsimile No. +41 22 338 82 70	e-mail: pct.team5@wipo.int

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> 02 January 2019	
Applicant's or agent's file reference tde06230725W	FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/EP2018/072863	International filing date <i>(day/month/year)</i> 24 August 2018
Priority date <i>(day/month/year)</i> 05 September 2017	
International Patent Classification (IPC) or both national classification and IPC G05B 19/418(2006.01)i	
Applicant TRUMPF WERKZEUGMASCHINEN GMBH + CO. 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 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

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2018/072863

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:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2018/072863

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

1. Statement

Novelty (N)	Claims	<u>1-19</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	_____	YES
	Claims	<u>1-19</u>	NO
Industrial applicability (IA)	Claims	<u>1-19</u>	YES
	Claims	_____	NO

2. Citations and explanations :

See Supplemental Box

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/EP2018/072863**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

Supplemental Box

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

Box V**Reasoned statement with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement**

[1] Reference is made to the following documents:

D1	US 2017/064667 A1 (MYCEK MARCIN [PL] ET AL) 2 March 2017 (2017-03-02)
D2	EP 2 963 953 A1 (POLAR ELECTRO OY [FI]) 6 January 2016 (2016-01-06)

[2] Irrespective of the lack of clarity mentioned below, the subject matter of claims 1-19 also does not involve an inventive step (PCT Article 33(3)), and therefore the requirements of PCT Article 33(1) are not met.

[2.1] D1 discloses the following features of claim 1:

An interior locating system ("buildings or other indoor areas", paragraph [0003]) for supporting production control of process workflows in the industrial production of workpieces in a production facility ("track objects within a manufacturing context, where object beacons can be used to track and/or monitor tools, fixtures, machines, or other objects", paragraph [0025]), ~~in particular in metal and/or sheet metal processing~~, comprising: a) a plurality of mobile transceiver units (OB1, OB2; figure 10) to which an object from a group of objects, which can perform movements in the space in an independent or driven manner, can be spatially assigned within the framework of process workflows in such a way that the position of a mobile transceiver unit can represent location information for the assigned object ("objects beacons ... the position of objects tagged with object beacons can be tracked", paragraph [0048]) and wherein each of the mobile transceiver units has a position signal module ("e.g. antenna", paragraph [0039]) which is designed to be operable in a locating mode for receiving, processing, generating and transmitting electromagnetic signals for determining the position of a mobile transceiver unit, which is to be located, of the mobile transceiver units ("processing system", paragraph [0039]; "beacon signals", paragraph [0040]; "transmitting control instructions to beacon", paragraph [0139]), b) an analysis unit which is designed to determine the position of the mobile transceiver unit to be located from propagation times of the electromagnetic signals between transceiver units in a position-determination process in order to perform tracking of a movement of a target object from the group of objects, to which target object the mobile transceiver unit to be located is assigned ("tracking system 300", paragraph [0054] and figure 4), and c) an energy consumption control unit ("conserve battery power", paragraph [0049]) which is designed to output a control signal for deactivating a locating mode of the position signal module of at least one of the mobile transceiver units when the at least one mobile transceiver unit is not required to participate in position-determination processes in order to thus in particular reduce the energy consumption of the at least one of the mobile transceiver units, and to output a control signal for activating the locating mode of the position signal module of the at least one of the mobile transceiver units from the deactivated state when the analysis unit requests that the at least one mobile transceiver unit participate in a position-determination process ("beacon signal ... frequency ... scheduled, broadcasting power ... scheduled", paragraph [0040]; "transmitting control instructions (e.g., updates, operation instructions, etc.) to the object beacon", paragraph [0139]).

D1 does not disclose:

in particular in metal and/or sheet metal processing.

This technically unclear feature (see Box VIII) is merely an embodiment measure that is common to a person skilled in the art and that does not have any technical effect.

The subject matter of claim 1 is therefore not inventive.

[2.2] The same applies, mutatis mutandis, to claims 15 and 16.

[2.3] The additional features of the following claims are likewise not inventive:

- claims 2 and 3: see D1: paragraphs [0039], [0040] and [0049];

Supplemental Box

- claims 4 and 17: D1 discloses, in paragraphs [0127]-[0140], the use of a virtual map ("virtual map") from which the position of the "object beacon" can be read in order to configure the latter on the basis of this information (paragraphs [0139] and [0140]); entering specific zones is therefore a well known measure;
- claims 5 and 18: see D1: "beacon signal ... frequency ... scheduled, broadcasting power ... scheduled", paragraph [0040];
- claims 6 and 7: see in this regard D2: configuration of a "BLE beacon" with regard to the surface to be covered, paragraphs [0013] and [0027];
- claim 8 - a "BLE beacon" transmits its transmission strength RSSI as information, on the basis of which it is possible to make modifications; see D2: paragraphs [0025]-[0029] and [0032];
- claims 9, 19 and 10: for example, D2: "motion detector ... restrain transmission when no-one is around", paragraph [0014];
- claim 11: D1: paragraph [0039];
- claim 12: this is a design option that is common to a person skilled in the art;
- claim 13: D1: paragraph [0024];
- claim 14: D1: figures 9 and 13.

Box VIII**Certain observations on the international application**

- [1] The application does not meet the requirements of PCT Article 6 because claims 1, 15 and 16 are unclear.

The use of the expression "in particular..." in these claims brings about a lack of clarity since these claims do not contain any further technical features that reinforce the "in particular" functional features. Therefore, the expression following the wording "in particular" is considered to be optional and non-limiting in the substantive examination.