

From the INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference tde06230725W		Date of mailing (day/month/year) 02 January 2019
International application No. PCT/EP2018/072863		FOR FURTHER ACTION See paragraph 2 below
International filing date (day/month/year) 24 August 2018	Priority date (day/month/year) 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

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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:

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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

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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

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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.