

**PATENT COOPERATION TREATY**

**TRANSLATION**

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	<b>31.03.2015</b>
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Applicant's or agent's file reference <b>G20145063</b>
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<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No. <b>PCT/JP2014/082038</b>	International filing date (day/month/year) <b>03.12.2014</b>	Priority date (day/month/year) <b>03.12.2013</b>
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International Patent Classification (IPC) or both national classification and IPC <b>E02F9/22 (2006.01) i, F16D48/02 (2006.01) i</b>
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Applicant <b>KOMATSU LTD.</b>
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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 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 66.1bis(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/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2014/082038

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
  - 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 filed or furnished:
  - a. (means)
    - on paper
    - in electronic form
  - b. (time)
    - in the international application as filed
    - together with the international application in electronic form
    - subsequently to this Authority for the purposes of search
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 in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE  
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International application No. PCT/JP2014/082038
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<b>Box No. V</b>	<b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>		
1. Statement	Novelty (N)	Claims <u>1-6</u>	YES
		Claims _____	NO
	Inventive step (IS)	Claims <u>1-6</u>	YES
		Claims _____	NO
	Industrial applicability (IA)	Claims <u>1-6</u>	YES
		Claims _____	NO

2. Citations and explanations:

Document 1: WO 2013/115399 A1 (HITACHI CONSTRUCTION MACHINERY CO., LTD.) 08 August 2013, entire text, all drawings

Document 2: WO 2011/074583 A1 (HITACHI CONSTRUCTION MACHINERY CO., LTD.) 23 June 2011, entire text, all drawings

Document 3: JP 2011-63945 A (KCM CORP.) 31 March 2011, entire text, all drawings

Document 4: JP 2008-248523 A (KOMATSU LTD.) 16 October 2008, entire text, all drawings

Document 5: JP 10-88625 A (KOMATSU LTD.) 07 April 1998, entire text, all drawings

The invention as in claims 1-6 is not disclosed in any of the documents cited in the ISR, and thus is novel, and involves an inventive step. In particular, none of the documents discloses a feature in which transmission torque transmitted from a power generation device to a drive wheel is controlled so that the difference between a first ratio, which is the ratio between a value corresponding to the target travel distance that is the

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**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

target when a vehicle travels to a position where excavated material is discharged after excavation with a bucket and a value corresponding to a target hoisting amount that is the target when a boom is hoisted after movement has been begun, and a second ratio, which is the ratio between a value corresponding to the actual distance traveled since movement was begun to the position where excavated material is discharged after excavation with the bucket and a value corresponding to the actual amount the boom was hoisted after movement was begun, becomes zero.