

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 20241037	FOR FURTHER ACTION See item 4 below	
International application No. PCT/IB2024/056482	International filing date (<i>day/month/year</i>) 03 July 2024 (03.07.2024)	Priority date (<i>day/month/year</i>) 04 July 2023 (04.07.2023)
International Patent Classification (IPC) or national classification and IPC See relevant information in Form PCT/ISA/237		
Applicant CARPI TECH B.V.		

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).
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

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.

3. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	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 Article 35(2) 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
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).

	Date of issuance of this report 23 December 2025 (23.12.2025)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Cécile Chatel e-mail ro.ib@wipo.int

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IB2024/056482

International filing date (day/month/year)
03.07.2024

Priority date (day/month/year)
04.07.2023

International Patent Classification (IPC) or both national classification and IPC
INV. E02B3/12 E02B3/16 E04H4/00

Applicant
CARPI TECH B.V.

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 usually 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:



European Patent Office
P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
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Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

Zuurveld, Gerben

Telephone No. -0



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 English, 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.
 - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13ter.1(a)),
 - ☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

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)	Yes: Claims	<u>1-14</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>1-14</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-14</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

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 separate sheet

Re Item V

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

1 Cited prior art

1.1 Reference is made to the following documents:

D1 WO 2014/166996 A1 (CARPI TECH BV [NL]) 16 October 2014 (2014-10-16)

D2 US 9 903 082 B2 (POWERCHINA HUADONG ENGINEERING CORP LTD [CN]) 27 February 2018 (2018-02-27)

2 Novelty and inventive step

2.1 Document D1, which is considered to form the closest prior art, does not disclose the feature of independent claim 1, in that the strip (8), which is inserted into each of the grooves (6) **is folded on itself**. The subject-matter of independent claim 1 is therefore novel, Article 33(2) PCT.

2.2 Corresponding independent claim 7 comprises the same distinguishing feature. The subject-matter of claim 7 is therefore also considered novel, Article 33(2) PCT.

2.3 However, the objection in **Re Item VIII** below, concerning the material used for strip (8), are to be noted in order to come to independent claims, the subject-matter of which can be considered satisfying the requirements of Article 6 PCT.

2.4 It is known from document D2 to have a strip of material inserted in a bend, as claimed in claims 1 and 7, see figure 2 of document D2. There is however no indication in the cited prior art to fold the strip on itself.

Therefore starting from document D1 as closest prior art, the skilled person can only arrive at the subject-matter of the independent claims by means of an inventive step, even if document D1 were to be combined with document D2.

Consequently the subject-matter of the claims is considered involving an inventive step, Article 33(3) PCT.

Re Item VII

Certain defects in the international application

- 1 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the cited prior art documents is not mentioned in the description, nor are these documents identified therein.
- 2 Claim 14, which is the last claim, refers to claim 15, which is obviously not correct. This should be remedied.

Re Item VIII

Certain observations on the international application

- 1 Independent claims 1 and 7 are not clear, Article 6 PCT, because of the wording "or equivalent material" and "or of equivalent material", as these wordings render the scope of protection of these claims indefinite. In order to come to subject-matter that can be considered clear and concise, these wordings should be removed from the independent claims.