

Written Opinion

Application No.

10202401131P

Application filing date

20/08/2019

(Earliest) Priority Date

1. This first Written Opinion is issued under Section 29(5) of the *Patents Act*.

2. This opinion contains indications relating to the following items:

- | | | |
|-----|-------------------------------------|---|
| I | <input checked="" type="checkbox"/> | Basis of the opinion |
| II | <input type="checkbox"/> | Priority |
| III | <input type="checkbox"/> | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| IV | <input type="checkbox"/> | Unity of invention |
| V | <input checked="" type="checkbox"/> | Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| VI | <input checked="" type="checkbox"/> | Clarity, Clear and Complete Disclosure, and Support |
| VII | <input type="checkbox"/> | Double patenting |

3. If no reply is filed, the Examination Report will be established on the basis of this opinion.

Intellectual Property Office of Singapore

1 Paya Lebar Link #11-03

PLQ 1, Paya Lebar Quarter

Singapore 408533

Email: operations@iposinternational.com

Date of Written Opinion:

20/09/2024

Authorized Officer

Liu Shuwei (Dr)

Written Opinion

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I. Basis of the opinion
<p>1. This opinion has been drawn on the basis of:</p> <p><input checked="" type="checkbox"/> the application as originally filed.</p> <p>2. <input type="checkbox"/> This opinion has been established based on the exclusion of additional matter beyond the earlier application, as indicated in the supplemental box.</p> <p>3. <input type="checkbox"/> This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the supplemental box.</p> <p>4. Additional observations, if necessary:</p>

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V. Reasoned statement with regard to novelty, inventive step or industrial applicability; Citation and explanation supporting such statement

Statement with regard to novelty, inventive step or industrial applicability

Novelty (N)	Claim(s)	1-20	YES
	Claim(s)	NONE	NO
Inventive Step (IS)	Claim(s)	1-20	YES
	Claim(s)	NONE	NO
Industrial applicability (IA)	Claim(s)	1-20	YES
	Claim(s)	NONE	NO

1. Citations

The following citations are referred to in this opinion. Full bibliographic details are provided in the Search Report:

- D1 – EP 0950879 A1
- D2 – US 2004/0244487 A1
- D3 – JP 2009-180699 A
(machine translation was used for the purpose of establishing the opinion)
- D4 – US 2019/0226900 A1

2. Novelty (Section 14 of the *Patents Act*) and Inventive Step (Section 15 of the *Patents Act*)

Claims 1, 16, 20

As none of prior art discloses a fin sensor with two fins, a base, a balance rib, a base coupler which are coupled as specified in claims 1, 16 (see claim construction in Box VII), a skilled person would not be guided to the fin sensor of claim 1, the method of making a fin coupler assembly of claim 16 by following the teachings of any of the available prior art documents, taken alone or in combination, without the application of inventive skills. Hence, claims 1, 16 are novel and inventive.

As none of prior art discloses a method of using a fin sensor with a driving transducer where the relative motion of two fins is at least partially restricted by at least one fin coupler and the motion of a base which coupled to the two fins is at least partially restricted by a balance rib, a skilled person would not be guided to said method of claim 20 by following the teachings of any of the available prior art documents, taken alone or in combination, without the application of inventive skills. Hence, claim 20 is novel and inventive.

Claims 2-15, 17-19

By virtue of dependency, claims 2-15, 17-19 are novel and inventive.

3. Industrial Applicability (Section 16 of the *Patents Act*)

The subject matter of claims 1-20 is industrially applicable.

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VI. Clarity, Clear and Complete Disclosure, and Support

The following observations on the clarity of the claim(s), on the question whether the disclosure is clear and complete, or on the question whether the claim(s) is (are) supported by the description, are made:

1. Clarity (Section 25(5)(b) of the *Patents Act*)

Claims 1, 16

Terms “balance rib” and “base coupler” in claims 1, 16 appear to define feature by function. It is not clear what the features of the rib are to realize the balance function or how the base is coupled and what the base is coupled to. Furthermore, since only one base is defined to be formed, it is unclear how would the rib be coupled to more than one base.

Term “base” means the lowest part of something, especially the part on which it rests or is supported. However, from the claim language as currently drafted, it is unclear in claim 16 which structure “the base” rests or support.

Hence, For the purpose of establishing this opinion, pending amendment from applicant, “more of” is not considered for a base, claims 1, 16 are construed to incorporate the features of claims 2-6 which describe the coupling between a balance rib, a base and a base coupler.

Claim 4

When claim 4 depends on claim 2, is it unclear how the balance rib is coupled to the middle portion of the base coupler as the structure of the base coupler is not defined.

When claim 4 depends on claim 3, it is unclear the position relation between the base and the base coupler as the balance rib is defined to be coupled to both the middle portion of the base and the middle portion of the base coupler.

Claims 2, 7, 8, 11-15, 18

The orientation of a cross axis in claims 2, 7, 8, 11-15, 18 is not clear.

Additionally, in claims 7, 8 it is unclear what the locations of more than one downstream end and upstream end are.

Claim 16

By defining “the at least one fin is coupled to the at least one fin coupler”, it is unclear as how many fins are coupled by each fin coupler. For the purpose of establishing this opinion, pending amendment from applicant, it is construed as “two fins are coupled with the at least one fin couplers”.

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For clarification of the Patent Examiner's comments in this report, direct communication may be arranged with the Patent Examiner via email. For the procedure to initiate such communication, please refer to the Patents Formalities Manual (please click [here](#)), under the heading **"Direct Communication with the Patent Examiner"**.

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