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Your ref.: CHE  
Application no.: 20180245 (please include in your reply)  
Applicant: Dag Herman Zeiner-Gundersen, Sindre André Zeiner-Gundersen  
**Due date: 2019.03.17**

## **Office action in patent application no. 20180245**

### **Basis of the opinion**

Description received 2018.02.16.  
Claims received 2018.02.16.  
Drawings received 2018.02.16.

### **Conclusion**

The subject-matter of the independent claim of the present application does fulfil both the novelty criteria and inventive step criteria and is therefore patentable. Still, there are some defects and observation in the claims, description and figures that has to be dealt with.

### **Results of the novelty search**

Reference is made to the following documents:

D1: SE 539684 C2  
D2: US 2003/0057319 A1

### **Assessment of patentability**

The following is a reasoned statement with regard to novelty and inventive step, ref. Norwegian Patents Act, Section 2, first paragraph.

#### *Novelty*

Document D1 is mentioned in the description of the present patent application, and this publication is considered to represent the prior art closest to the subject matter of claim 1. D1 discloses an apparatus for generating the leptons muon and kaons and pions (see the abstract and page 11 line 32 to page 12 line 11), and with one source device sending laser beam (15) to trigger ultra-dense hydrogen on accumulation portion (41) at the bottom of the "bowl" formed by the upper face (27) of the accumulation member(19). D1 further discloses an injection device (outlet 37) and catalyst having a material composition to cause transition of hydrogen to an ultra-dense state whereby ultra-dense hydrogen is formed at catalyst, and transferring ultra-dense hydrogen into accumulation portion (41). D1 discloses further pulse triggering the ultra-dense hydrogen by field source to convert

hydrogen/deuterium/tritium into the leptons muon, kaons and pions. See figures 2 and 3 and pages 9 and 10 in D1.

D1 does not disclose use of gimbal, upper and lower reaction chamber and neither triggering ultra-dense hydrogen/deuterium/tritium at the surface of gimbal that has undulation shape. The subject-matter of the independent claim 1 and the related dependent claims 2-13 is therefore novel.

#### *Inventive step*

Use of gimbals are well known. Se e.g. paragraphs [15], [83] and [84] in D2 describing a gimbal that can be utilized in spacecraft or aircraft to compensate for movements

However, we do not find any publication describing undulation surface on gimbal or publications describing triggering substances like ultra-dense hydrogen/deuterium/tritium at undulation shaped surface.

D1 describes trapping and accumulating ultra-dense hydrogen/deuterium/tritium inside accumulation portion 41 of accumulation member 19.

The objective technical problem to be solved by the apparatus according to claim 1, in view of D1, is how to find an alternative way of trapping and accumulating the ultra-dense hydrogen/deuterium/tritium in such a way that it is easier afterwards to irradiate the ultra-dense substance with field sources like lasers.

If a person skilled in the art wants to solve the said objective technical problem, it is not regarded obvious for the person to modify D1 by introducing use of gimbal with undulation shape of surface and irradiating the ultra-dense material at the surface. Neither D1 nor D2 describe an undulation shaped surface, and these publications will therefore not lead the person skilled in the art to modify D1 in such a way. The subject-matter of the independent claim 1 and the related dependent claims 2-13 therefore has inventive step.

#### **Certain defects and observations**

Claim 1 does not meet the requirements of Norwegian Patents Act, Section 8, Second paragraph, first sentence, in that the matter for which protection is sought is not clearly defined.

The description only supports that the lepton muon and the mesons pions and kaons are generated, see page 8 with theoretical discussion. The claim 1 therefore should limit the lepton to be muon and the mesons to be pions and kaons.

The wording "gimbal surface (8) moving relative to the modular apparatus (10) responding to gravitational force in response to external movements of the modular apparatus (10) or a functionally controlled movement" in claim 1 is unclear, particular the wording "responding to gravitational force in response to external movements". It is unclear from the wording how the gimbal moves in relation to gravitational direction and the modular apparatus and also unclear how to the controlled movement relates to movement of the modular apparatus.

Further, it is also unclear in claim 1 what "triggering" means in relation to ultra-dense hydrogen. It is not every field source that can be utilized, and it should be mentioned in the

claim that the field from the field source is adapted to induce pions, kaons and muons from ultra-dense hydrogen. The claim should mention that the ejection device transfers ultra-dense hydrogen into upper and lower reaction chamber. We assume that the ejection device has to be nearby the gimbals surface, but the claim does not mention where the ejection device is arranged.

The dependent claim 7 and 8 are unclear. It is not supported in the description what leptons or mesons that can be converted to muon at an alloy film barrier.

It is unclear in the description page 6 what "the condensing surface (1)" refers to. Is it "dynamic gimbal" with numeral referring 1 or is it "dynamic gimbal surface undulation" with numeral referring 8?

The description of the invention refers to several patent applications and papers in journals that we cannot find. It applies for: XP 012PP199438, US 20046004886 A1, XP 029387848 CT, WO 2014293124 A1, DE 102013434749 A1, L. Holmlid, Int. J. Modern Phys. E24(2015) 1535026, L. Holmlid, Int. J. Modern Phys. E24(2015) 1535046, L. Holmlid, Int. J. Modern Phys. E24(2016) 1535085. The correct patent application numbers should be stated, and the said papers in journals should be written in a form that makes it possible to find or order the papers.

The drawing should be on separate pages and not on pages with the description with text describing the invention. See «patentretningslinjene del C, kap. II, punkt 4.1», (guidelines for examination) for other guidelines for the drawings.

## **Instructions**

The stated deficiencies of the claims must be corrected.

We recommend that a patent expert helps you when you formulate new patent claims and when you correct deficiencies in the descriptions and in the drawings. In that way, you may get better patent protection of your invention.

If you amend the patent claims, you must state where in the application as filed support for the amendment is found, ref. Regulations to the Norwegian Patents Act (Patent Regulations), Section 20.

If you file an amended description, you must specify which parts of the description are not in accordance with the previously filed description and specify in which way the amendments imply anything new with respect to the substantive content, ref. Patent Regulations, Section 21.

## **Additional information to the applicant**

### **Supplementary search**

A novelty search is not considered as complete if it was carried out at a time when the newest relevant material was unavailable in the search material. You can request a supplementary search to disclose whether there exist older, not yet publicly available, national patent applications, EPO applications that may apply to Norway, see Norwegian Patents Act, Section 66f or international patent applications that have been continued in Norway according to Norwegian Patents Act, Section 31. Such applications may prevent novelty according to Norwegian Patents Act, Section 2, second paragraph, second

sentence. A supplementary search cannot be carried out until after approx. 22 months from the filing date of the application.

### **Postponement of grant**

A prospective grant of a patent implies that all documents of the application becomes publicly available, even when this happens earlier than 18 months after the filing date. However, you may request, in a separate letter, that the grant of the patent shall be postponed until the application becomes publicly available according to Norwegian Patents Act, Section 22, second paragraph, i.e. after 18 months, see Regulations to the Norwegian Patents Act (Patent Regulations), Section 33.

### **Information about patenting outside Norway**

If your intention is to apply for patent abroad, please be aware of the following:

- You can apply for a patent abroad with priority from the Norwegian application within 12 months from the Norwegian filing date (the priority year). This means that the novelty of the patent is assessed as if it was filed simultaneously with the application in Norway. If anyone else has applied for a similar patent during the priority year, your patent application will precede due to its older priority.
- You may claim priority from the first application (the priority application) when filing the application abroad, or the priority claim has to be forwarded within 16 months from the Norwegian filing date and at the latest within four months after filing. You must also submit a certificate of priority. The Norwegian Industrial Property Office issues such a certificate of priority on demand if a set fee is paid.

### **Provisional protection**

Patent applications in English will be published 18 months after you first submitted your application (or from the priority date). In order to obtain provisional protection for your invention, you must submit a translation of the claims into Norwegian. The patent claims in Norwegian will form the basis for provisional protection during the application period. The provisional protection applies only insofar as the Norwegian and English texts correspond with each other. Provisional protection takes effect once you have supplied a translation of the claims and notice of this has been published in the Norwegian Official Patent Gazette (Norsk patenttidende).

### **Time limit for response**

You are invited to submit a written response within the due date above. You may respond via [Altinn](#). If you fail to respond, the application will be shelved. However, the processing of the application may be resumed by paying a fee. Ref. Norwegian Patents Act, Section 15, third paragraph and Regulation Relating to Payments etc. to the Norwegian Industrial Property Office and the Board of Appeal for Industrial Property Rights (Regulation on fees), Section 26. You may request an extension of the due date, see «patentretningslinjene del A, kap. I, punkt 5.1» Examination Guidelines, part A, Chapter I, 5.1 (in Norwegian only). This must be done within the due date.

For general provisions regarding submitting of documents and payments, see Regulation on fees, Sections 1-6 and 8.

### **For your information**

Relevant laws and regulations, as well as Examination Guidelines are available on our webpage, [www.nipo.no](http://www.nipo.no).

Information to applicants using Altinn: You will find cited publications linked in the enclosed search report or as electronic attachments. They will be forwarded in paper format only if not available in electronic format or if protected by copyright.

Please contact us if you have any questions

Sincerely,

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Enclosures: search report