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Datasheet for the decision of 26 April 2010

Case Number: T 0851/07 - 3.5.02

Application Number: 99968431.9

Publication Number: 1248351

IPC: H02K 44/08

Language of the proceedings: EN

Title of invention:
Method for the production of electric energy and MHD generator therefor

Applicant:
Ilyin, Viktor Vasilievich

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 83

Relevant legal provisions (EPC 1973):
-

Keyword:
"Sufficiency of disclosure - no"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0851/07 **-** 3.5.02

D E C I S I O N
of the Technical Board of Appeal 3.5.02
of 26 April 2010

Appellant: Ilyin, Viktor Vasilievich
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Representative: Urgas, Enn
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 22 December 2006 refusing European patent application No. 99968431.9 pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: M. Ruggiu
Members: M. Rognoni
H. Preglau

Summary of Facts and Submissions

I. The appellant (applicant) appealed against the decision of the examining division refusing European patent application No. 99 968 431.9.

II. In the decision under appeal, the examining division considered the applicant's request to grant a patent on the basis of the following documents:

Description: Pages 1 to 3, filed with entry into the regional phase before the EPO;

Claims: No. 1 to 17, filed with entry into the regional phase before the EPO;

Drawings: Sheet 1/1 filed with entry into the regional phase before the EPO.

The examining division came then to the conclusion that the application did not comply with the requirement of Article 83 EPC because it did not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

III. In the notice of appeal, the appellant requested that the decision under appeal be set aside and that the patent be granted.

With the statement of grounds of appeal, the appellant submitted the following "Enclosures":

D12: O. Gritskevitch, "Hydro-Magnetic Generator", *New Energy Technology*, September-October 2001, pages 100-104;

D13: "Bubble fusion" from Wikipedia;

D14: US-A-4 333 796.

IV. In a communication dated 9 February 2010, accompanying the summons to oral proceedings, the Board observed, *inter alia*, that the subject-matter of the present application seemed highly speculative and thus not in compliance with Article 83 EPC.

V. In reply to the Board's communication, the appellant filed with a letter dated 30 March 2010 an "abstract concerning physical mechanisms of generating energy in MHD" ("About mechanisms of generation of energy in MHD of O. V. Gritskevich"). In the same letter the appellant's representative informed the Board that, in view of the annex to the summons, the appellant had decided that attending the oral proceedings was "unlikely to prove practical". The appellant's representative further requested that the present appeal be discussed in the absence of the appellant.

VI. Oral proceedings were held on 26 April 2010 in the absence of the appellant.

VII. Claim 1 reads as follows:

"The method for the production of electric energy by arranging the motion of conducting medium in a predetermined direction along a closed circuit when the produced electric energy is collected by means of electromagnetic windings, ***which differs in that*** polar liquid is used as a medium which is ionized at least at the stage of launching and polar liquid is circulated by means of traveling magnetic field with the help of electromagnetic exciting windings, as this takes place, the motion of the medium is arranged in a hermetic channel internal walls of which have a dielectric constant higher than the polar liquid has."

Claims 2 to 6 are dependent on claim 1.

Claim 7 reads as follows:

"The MHD generator containing a toroidal channel with the body made of non-magnetic material inside of which there is a dielectric cover and electromagnetic system with windings, ***which differs in that*** the channel is made hermetically and filled with polar liquid, and a dielectric constant of the cover is higher than the polar liquid has [***sic***]."

Claims 9 to 17 are dependent on claim 7.

VIII. The appellant's arguments relevant to the present decision can be summarized as follows:

It was known from "Wikipedia" (see D13) that bubble fusion or sonofusion was the common name for the

nuclear fusion reaction hypothesised to occur during sonoluminiscence, an extreme form of acoustic cavitation. Officially this reaction was termed "Acoustic Inertial Confinement Fusion" (AICF) since the inertia of the collapsing bubble wall confined energy, causing a rise in temperature. The high temperatures achieved through sonoluminiscence increased the possibility that it might be a means for achieving thermonuclear fusion. D14 taught a method of generating energy by acoustically induced cavitation fusion and a corresponding reactor for carrying out such method.

If a person skilled in the art built a magneto hydrodynamic (MHD) generator in accordance with claims 7 to 17 and carried out the operations disclosed in claims 1 to 6, a solution would be obtained for the task of upgrading efficiency, increasing reliability and ecological safety and simplifying the design of an MHD generator, by replacing polar water and the internal layer during the operation. It was immaterial whether the process was called "cold nuclear fusion", "nuclear fusion", "thermonuclear reactions in the bubbles", "cavitation" or something else because this did not have an impact on the operation of the device.

D12 disclosed that the layer referred to in the present application was made of barium titanate by spraying and that the thickness of the layer was about 1µm. Barium titanate had many useful properties which could create the described sound vibrations. This disclosure had been made on the "New Energy 1999 Symposium".

As to the meaning of the term "synergistic" used to define the layer referred to in the application, it was the same as synergetic and meant "acting together".

In summary, the applicant believed that all the essential features which determined the extent of the invention had been specified in the claims and that the claims did not contain any feature linked to cold nuclear fusion.

Reasons for the Decision

1. The appeal is admissible.

2.1 Claim 1 of the present application relates to a *"method for the production of electric energy"* by means of the following steps:

- *"arranging the motion of conducting medium in a predetermined direction along a closed circuit",*

- collecting the *"produced electric energy"* by means of electromagnetic windings.

In other words, the method of the invention is supposed to generate an electromagnetic force by causing an electrically charged fluid to flow through electric coils.

2.2 The features of claim 1 which appear to be responsible for the flow of electric charges through the coils are essentially specified as follows:

(a) *"polar liquid is used as a medium which is ionized at least at the stage of launching",*

(b) *"polar liquid is circulated by means of traveling magnetic field with the help of electromagnetic exciting windings",*

(c) *"the motion of the medium is arranged in a hermetic channel internal walls of which have a dielectric constant higher than the polar liquid has"* (emphasis added).

2.3 A precondition for energy production according to the claimed method is that the energy which can be extracted as electromotive force exceeds the electromagnetic energy required to ionize the medium and to accelerate and sustain its motion. The application (see published application, column 3, lines 26 to 31) identifies the following sources of *"excess energy"*:

(i) *"free electrons"* which are said to appear as *"a result of water flow motion",*

(ii) *"friction of water 3 on layer 2",*

(iii) *"electrostatic breakdowns of cavitational-and-vacuum structures",*

(iv) *"existing reaction of cold nuclear fusion".*

In summary, *"excess energy (in respect to input energy) releases from water 3 and internal layer 2 which should*

be replaced with time" (see published application, column 3, lines 34 to 38).

2.4 Although *"layer 2"* is manifestly an essential feature of the invention, it is merely qualified as *"synergistic"*, which can only imply in the context of the application that the layer in question should "act together" with distilled water (see published application, column 3, lines 5 to 9). In fact, the application is totally silent about the kind of materials which could be used to form *"layer 2"*.

3.1 In the statement of grounds of appeal, the appellant has pointed out that *"layer 2"* was barium titanate and that this disclosure was made during the "New Energy 1999 Symposium". As evidence, the appellant has filed D12.

3.2 D12 was published in the September-October 2001 issue of *New Energy Technology* and thus is not part of the state of the art.

As to the disclosure allegedly made during the New Energy 1999 Symposium, it appears that said Symposium was held on 27 and 28 August 1999, *i.e.* after the priority date (24 August 1999) of the present application. Consequently, the alleged disclosure can not be considered to form part of the skilled person's knowledge.

3.3 As to the other documents referred to by the appellant in the statement of grounds of appeal and in the letter dated 30 March 2010, only D14 was published before the

priority date of the present application and can thus be regarded as prior art.

However, D14 is a US Patent and, as such, cannot be considered to reflect the general knowledge of a skilled person. Furthermore, it relates to a method of generating energy by acoustically induced cavitation fusion within a liquid metal such as lithium or an alloy thereof. It is thus a set up which bears no resemblance with the one of the present application and can provide no information on the essential features of the invention which the Board considers insufficiently disclosed (see item 2.4 above).

3.4 As to the source of electrical output in an MHD generator exploiting the alleged interaction between water 3 and *"layer 2"*, it is stated in D12 (page 3, third full paragraph) that it is *"a nuclear reaction, which is not generally known to mainstream science".*

In reality, the present application does not disclose any specific details which could actually enable the skilled person to produce electric energy according to the claimed method or to build the claimed generator, but merely hints at the possibility of exploiting alleged physical interactions to produce energy.

Furthermore, it should be noted that a person of ordinary skills and trained in mainstream science cannot be expected to have the background information and knowledge required to carry out an invention essentially based on effects which remain highly controversial in the world of physics and which, if observed at all, have hardly been proved reproducible.

4. The same observations apply, *mutatis mutandis*, to the *"MHD generator"* according to claim 7.

5.1 In summary, the Board concurs with the contested decision as to the insufficiency of disclosure of the appellant's alleged invention.

5.2 Since the application documents as originally filed do not meet the requirement of Article 83 EPC, the appellant's request to grant a patent on the basis thereof must be refused.

Order

For the above reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

U. Bultmann M. Ruggiu