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**Agenzia Brevetti
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**EUROPEAN PATENT OFFICE
D-80298 München
GERMANIA/DEUTSCHLAND**

Pisa, April 29, 2011

VIA TELEFAX
0049 89 23994465

To the kind attention of the Examining Division

Re: Application EP08873805.9 - EP2259998 in the name of PASCUCCI
Our Ref: B22/0027

Dear Sir/Madame,

These are observations under art. 115 EPC against the new set of claims filed on December 17, 2010.

Claim 1

Amended claim 1 is not patentable under art 52, 54(2) EPC since it is anticipated by E1: WO9520816A1, in the name of Piantelli, Focardi, Habel.

In fact, E1 recites:

1. A method for carrying out an exothermal reaction of nickel and hydrogen (*see page 6, lines 12-20; examples 1,2,4, where Nickel and Hydrogen are always present together*), characterized in that said method comprises the steps of: providing a metal tube (2); filling said metal tube with a nickel powder (*page 13, lines 28-29 : tubular "chamber 2 can be filled with metallic powder"; page 13, lines 23-24; claim 33*) even of nanometric dimensions (*size of powder not specified in E1, but a generic powder can contain also nanometric particles*), heating (*see throughout the description, heating step*) said nickel powder to a high temperature (*Claim 1: T greater than Debye temperature, which for Nickel is 167°C, everywhere throughout the text, 220°C in example 1 for a Nickel alloy; 198°C in example 2 for pure Nickel; 210°C in example 4 for pure Nickel*) and injecting a pressurized hydrogen gas (*claim 11+12 Hydrogen at a pressure between 1mbar and 4bar; page 11, lines 7-12*), into said metal tube (2), to provide in said metal tube a high temperature and pressure hydrogen gas saturated environment, thereby generating energy (*see throughout the description, stationary step, heat exchange step; see examples 1,2,4*).



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Therefore, claim 1 lacks novelty over E1.

Claim 2

Amended claim 2 is not patentable under art 83 EPC.

Claim 2 recites

2. A method according to claim 1, characterized in that said method comprises the further step of providing **catalyzer materials** in said tube.

The description refers only generically to a catalyzer (*catalytic action of optional elements*, WO 2009125444, page 5, lines 11-12, without any further description of the *optional elements*).

A person skilled in the art has no possibility to understand which catalyzer materials are used, and which property or function the catalyzer has with respect to the nickel core.

Claim 3

Claim 3 is anticipated by E1: WO9520816A1

E1 provides:

3. A method according to claim 1, characterized in that said high temperature is preferably from 150 to 500°C (*temperature of Nickel greater than Debye temperature, which for Nickel is 167°C: see all E1 and claims 1 and 2 of E1, as well as examples 1,2,4 of E1*).

Claim 4

Claim 4 is anticipated by E1: WO9520816A1

E1 provides:

4. A method according to claim 1, characterized in that said injected pressurized hydrogen gas has a pressure preferably from 2 to 20 bars (overlapping ranges with E1: *claim 11+12 Hydrogen at a pressure between 1mbar and 4bar; page 11, lines 7-12*).

It should be noted that a limitation of the range above 4 bar would infringe art. 123(2) EPC, because there is no basis in the specification for such limitation

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In any case a limitation of the range above 4bar, if it could have been possible, would not have involved an inventive step. In fact, above 4 bar the absorption of Hydrogen in Nickel no longer takes place, unless at much higher pressures (>50bar).

Claim 5

Amended claim 5 is not patentable under art 83 EPC.

Claim 5 recites:

5. A method according to claim 2, characterized in that said injected pressurized hydrogen gas has a non-constant pulsating pressure (In the description of WO 2009125444, lines 19-24 there is only reference to "*A solenoid valve 4 adjusts the pressure under which hydrogen 5 is introduced into the metal tube. Both the temperature generated by the electric resistance or resistor and the hydrogen injection pressure can be easily adjusted either to constant or pulsating values*").

A person skilled in the art does not know how to pulsate the pressure. He/she knows only that the pressure has to be between 2 and 20 bars and that it can be pulsated. Infinite possibilities of pulsation of the pressure can be chosen and the applicant has given no examples of pulsation. Too many variable parameters are involved: amplitude, frequency, rise time of the impulse pressure, wave form, etc.

Claim 5 is also anticipated by E1: WO9520816A1

In page 11, lines 7-12 E1 discloses a method of applying a pressure stress by applying pressure gradients to the gas, such as Hydrogen. A pressure gradient can be construed as a pulsation from a first value to a second value. A pressure stress is an impulse pressure.

Therefore, claim 5 lacks novelty over E1.

Claim 6

Claim 6 is not patentable because it violates Art 84 EPC.

Claim 6 recites:

6. A method according to claim 1, characterized in that said temperature is variable (*Variable temperature may be construed as following a desired temperature law, i.e. pulsating, or randomly variable, etc.*)

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It is not clear for a skilled person which feature is defined by the wording "*said temperature is variable*". Such a broad definition is also not supported by the description.

Claim 6 is not patentable as anticipated by E1: WO9520816A1, as a consequence of the lack of clarity.

In E1 it is said that the temperature must be greater than the Debye temperature, which for Nickel is 167°C and lower than the transition temperature where the metal loses its crystalline properties, see page 13 line 30 – page 14, line 8.

Any working temperature of the core can be chosen between said limits, i.e. in E1 the withdrawal of heat from the core by the heat exchange fluid must assure that the temperature is always maintained between the two limits (Debye temperature and crystal transition temperature), otherwise the reaction stops. But since it is impossible to keep the temperature exactly fixed, because the nuclear reactions in the core are not easily foreseeable, consequently the working temperature is variable, because it is impossible to keep it exactly constant.

Claim 6 is not patentable also because it does not fulfil Art 83 EPC.

In the description of WO 2009125444, lines 21-24 there is only reference to "*Both the temperature generated by the electric resistance or resistor and the hydrogen injection pressure can be easily adjusted either to constant or pulsating values.*"

Lack of clarity of claim 6 could be relieved by construing *variable* as *pulsating*, based on the latter paragraph.

However, a person skilled in the art does not know how to pulsate the temperature. He knows only that the temperature has to be set between 150 and 500 °C and that it can be pulsated. Too many variable parameters of the temperature pulsation are involved: amplitude, frequency, rise time, wave form, etc. So, infinite possibilities of pulsation of the temperature can be chosen and the applicant has given no examples.

Claim 7

Claim 7 is non patentable as anticipated by E1, for the same reasons of Claim 1 above.

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**EUROPEAN PATENT OFFICE
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Claims 8-9 are non patentable for the same objections raised in the International Preliminary Report on Patentability, issued on 15/6/2010 paragraph 4.2.

Applicant's letter dated 17/12/2010

In the letter all the arguments are based on D1. In the present observations under art. 115 EPC a new document E1(WO9520816A1) is introduced. Therefore, the arguments based on D1 are not valid also for E1.

In the letter dated 17/12/2010, an article is cited and attached: S. Focardi and A. Rossi "A new energy source from nuclear fusion" published on March 22, 2010.

It is noted that one of the authors of the article is the same as one of the applicants of E1, i.e. Focardi Sergio, and the other co-author of the article is Andrea Rossi, the inventor of the present application.

It is apparent that the present application aims to patent an embodiment of the same invention as disclosed in 1995 by Piantelli, Focardi and Habel, without adding special features.

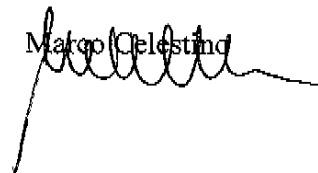
It is noted that D2 and D3 are two of the many citations on the same arguments. A more complete list of citations is attached.

We respectfully request that the examiner takes into account the above observations during the examination proceedings.

Yours sincerely

AGENZIA BREVETTI & MARCHI

Marco Celestino



MC/rdg

Encl.: E1 WO9520816A1
List of citations