

Docket No.: 1011-1203

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)

Andrea Rossi)

Group Art Unit: 3646

Serial No.: 12/736,193)

Examiner: Sean P. Burke

Filing Date: September 16, 2010)

**Title: METHOD AND APPARATUS FOR CARRYING OUT NICKEL AND
HYDROGEN EXOTHERMAL REACTIONS**

New York, NY 10020

September 25, 2014

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

AMENDMENT

Madam:

**This Amendment is being filed in response to the Office Action that was
mailed March 26, 2014. Kindly amend the above identified application as follows:**

IN THE CLAIMS

1.(currently amended): A method for carrying out an [[h]] exothermal reaction of nickel and hydrogen, characterized in that said method comprises the steps of providing a metal tube, introducing into said metal tube a nanometric particle nickel powder and injecting into said metal tube [[a]] hydrogen gas having a temperature much greater than 150°C~~[[.]]~~ and a pressure much greater than 2 bars.

2. (original): A method according to claim 1, characterized in that said hydrogen temperature varies in a range from 150 to 500°C.

3. (original): A method according to claim 1, characterized in that said nickel powder is a nickel isotope powder.

4. (original): A method according to claim 1, characterized in that said hydrogen is injected into said tube under a pulsating pressure.

5. (original): A method according to claims 1 and 2, characterized in that said hydrogen temperature is a variable temperature which varies in said range from 150 to 500° C.

6. (original): A method according to claim 1, characterized in that said metal tube is a copper metal tube.

7. (currently amended): A modular apparatus for providing an [[h]] exothermal reaction by carrying out the method according to claim 1, characterized in that said apparatus comprises a metal tube (2) including a nanometric particle nickel powder (3) and a ~~high temperature and pressure~~ hydrogen gas at high temperature and pressure.

8. (canceled)

9. (currently amended): An apparatus ~~method~~ according to claim 7, characterized in that said nickel powder filled metal tube (2) is a copper tube, said copper tube further including at least a heating electrical resistance, said tube being encompassed by a jacket (7) including either water and boron or only boron, said jacket (7) being encompassed by a further lead jacket (8) in turn optionally encompassed by a steel layer (9), said jackets (7, 8) being adapted to prevent radiation[[s]] emitted from said copper tube (2) from exiting said copper tube (2), thereby also transforming said radiation[[s]] into thermal energy.

10. (currently amended): An apparatus according to claim [[1]] 9, characterized in that said apparatus comprises, encompassing said nickel powder, hydrogen and electric resistance (101) containing copper tube (100) a first steel-boron armored construction (102) encompassed by a second lead armored construction (103) for protecting said copper tube (100), a hydrogen bottle connection assembly (106) and a hydrogen bottle (107), said apparatus further comprising, outside of said lead armored construction (103), a cooling water steel outer pipe assembly (105).

REMARKS

The Examiner is thanked for granting a personal interview to Dr. Andrea Rossi and the undersigned on April 22, 2014. The invention was discussed as well as the Office Action of March 26, 2014. The rejections for lack of enablement under 35 U.S.C. §112, first paragraph and for inoperability under 35 U.S.C. §101 were discussed and the Examiner indicated that a submission which provided evidence of the operability of the process would be considered. No agreement was reached as to the allowability of any claim.

In the Office Action, the Examiner noted that the listing of references in the specification was not a proper information disclosure statement. For this reason, an Information Disclosure Statement in conformance with 37 CFR §1.97 is being submitted with this Amendment.

The specification was objected to as inoperable. The Examiner commented that "there is no evidence in the corpus of nuclear science to substantiate the claim that nickel will spontaneously ionize hydrogen gas and thereafter "absorb" the resulting proton." The reaction of " $^{58}\text{Ni}(p,\gamma)^{59}\text{Cu}$ " was characterized as being known and experimentally observed "in the context of an accelerated beam into a nickel target." The Examiner further stated that "the element of acceleration is necessary in this matter-it is the only way for the proton to overcome the basic Coulomb repulsion between the proton and the nickel nuclei." It was also noted that if the reaction occurred as claimed by the Applicant, it would also occur spontaneously in nature which would result in the reaction being a natural phenomenon and that the ambient supply of hydrogen would cause any sample of nickel to automatically undergo the reaction. Separate rejections were also entered under 35 U.S.C. §101 and 35 U.S.C. §112, first paragraph for the reason given in the objection to the specification and because any claim that is inoperable is necessarily non-enabled.

Furthermore, the objection to the specification as being inoperable has not been based on any cited reference. It is essentially a recitation of opinion that is not supported by any authority and does not address the subject matter of the claims of the present application. When inoperability is raised by the PTO, the legal basis for refusing the application is actually the lack of a practical utility for the claimed subject matter. The burden is upon the Office to provide evidence that one of ordinary skill in

the art would reasonably doubt the asserted utility. *In re Swartz*, 232 F3d 862; 56 USPQ2d 1703 (Fed. Cir 2000).

The provisions of MPEP§2107.II(C) provide in part that:

(2) Where the asserted specific and substantial utility is not credible, a prima facie showing of no specific and substantial credible utility must establish that it is more likely than not that a person skilled in the art would not consider credible any specific and substantial utility asserted by the applicant for the claimed invention. The prima facie showing must contain the following elements:

(i) An explanation that clearly sets forth the reasoning used in concluding that the asserted specific and substantial utility is not credible;

(ii) Support for factual findings relied upon in reaching this conclusion; and

(iii) An evaluation of all relevant evidence of record, including utilities taught in the closest prior art. (emphasis added)

The Office Action of March 26, 2014 provided the explanation required by subparagraph (i) but the support and evaluation required by subparagraphs (ii) and (iii) were not provided.

In the present application, a detailed description of an apparatus and operating conditions was provided in the specification at pages 9-15. This evidence has not been challenged or contradicted by the citation of any authority.

For these reasons, a *prima facie* case of inoperability/ lack of utility has not been established and it is requested that the objection to the specification, the rejection under 35 U.S.C. § 101 and the rejection under 35 U.S.C. §112, first paragraph be withdrawn.

Claims 1 and 7 were objected to because of the use of the term “hexothermal”. This is a typographical error that has been corrected by this Amendment. The reaction was disclosed as being exothermal in the specification at page 5, lines 31-32. For this reason, it is requested that this ground of objection be withdrawn.

Claims 1 and 7 were rejected under 35 U.S.C. §103(a) as being obvious over Butler et al. (Butler).

Reconsideration is requested.

As noted above, claims 1 and 7 have been amended to recite an “exothermal” reaction. Claim 7 has also been amended to improve the syntax by repositioning the phrase “high temperature and pressure hydrogen gas” so that the amended text of claim 7 now reads “hydrogen gas at high temperature and pressure”. Claim 8 has been canceled and claim 9, which was dependent on claim 1, has been amended to be dependent on amended claim 7. Claim 9 has also been amended to revise the term “apparatus method” to read “apparatus”.

The Examiner applied Butler to claims 1 and 7 as using the “more traditional method of nucleosynthesis which employs accelerating protons into a stationary target.” The Examiner concluded that: “[E]ven if the alleged reaction could occur, one of ordinary skill in the art would understand that the reaction would be subject varying the basic reaction parameters”.

Amended claim 1 recites that the claimed method comprises the steps of providing a metal tube into which is introduced nanometric nickel powder and a hydrogen gas having a temperature greater than 150°C and a pressure greater than 2 bars. Amended claim 7 recites, among other things, an apparatus comprising a metal tube including a nanometric nickel powder and hydrogen gas at high temperature and pressure.

Butler describes a reaction that uses silver disks that are electroplated with nickel. There is no mention of the use of nanometric nickel powder. The reaction disclosed by Butler required the use of a Van de Graaff accelerator that provides a source of protons that were used to bombard the silver plates that were electroplated with nickel. Butler does not mention the use of hydrogen or the temperature and pressures recited in amended claim 1. The apparatus defined by claim 7 is not made obvious by Butler because Butler is silent as to any metal tube that contains nanometric nickel and hydrogen as pointed out in amended claim 7. In other words, the limitations of claims 1 and 7 are clearly not anticipated or rendered obvious by the teachings of Butler. For these reasons, it is requested that this ground of rejection be withdrawn.

An early and favorable action is earnestly solicited. A petition to suspend prosecution is being simultaneously filed with this Amendment.

Respectfully submitted,

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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)		Docket Number (Optional) 1011-1203
Application Number 12/736,193	Filed September 16, 2010	
For METHOD AND APPARATUS FOR CARRYING OUT NICKEL AND HYDROGEN EXOTHERMAL REACTIONS		
Art Unit 3646	Examiner Sean P. Burke	

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

	Fee	Small Entity Fee	Micro Entity Fee	
<input type="checkbox"/> One month (37 CFR 1.17(a)(1))	\$200	\$100	\$50	\$ _____
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- Applicant asserts small entity status. See 37 CFR 1.27.
- Applicant certifies micro entity status. See 37 CFR 1.29.
Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.
- A check in the amount of the fee is enclosed.
- Payment by credit card. Form PTO-2038 is attached.
- The Director has already been authorized to charge fees in this application to a Deposit Account.
- The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to
Deposit Account Number 08-1540
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WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

I am the

- applicant/inventor.
- assignee of record of the entire interest. See 37 CFR 3.71. 37 CFR 3.73(b) statement is enclosed (Form PTO/SB/96).
- attorney or agent of record. Registration number 25,669
- attorney or agent acting under 37 CFR 1.34. Registration number _____.

/James V. Costigan/

Signature

September 25, 2014

Date

James V. Costigan

Typed or printed name

(212) 302-8989

Telephone Number

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.

- * Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Electronic Patent Application Fee Transmittal

Application Number:	12736193
Filing Date:	16-Sep-2010
Title of Invention:	METHOD AND APPARATUS FOR CARRYING OUT NICKEL AND HYDROGEN EXOTHERMAL REACTION
First Named Inventor/Applicant Name:	Andrea Rossi
Filer:	James V. Costigan
Attorney Docket Number:	1011-1203

Filed as Small Entity

U.S. National Stage under 35 USC 371 Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Petition Fee-37CFR 1.17(g)(GroupII)	2463	1	100	100
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 3 months with \$0 paid	2253	1	700	700
Miscellaneous:				
Total in USD (\$)				800

Electronic Acknowledgement Receipt

EFS ID:	20249222
Application Number:	12736193
International Application Number:	
Confirmation Number:	2834
Title of Invention:	METHOD AND APPARATUS FOR CARRYING OUT NICKEL AND HYDROGEN EXOTHERMAL REACTION
First Named Inventor/Applicant Name:	Andrea Rossi
Customer Number:	47888
Filer:	James V. Costigan
Filer Authorized By:	
Attorney Docket Number:	1011-1203
Receipt Date:	25-SEP-2014
Filing Date:	16-SEP-2010
Time Stamp:	18:11:51
Application Type:	U.S. National Stage under 35 USC 371

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Amendment/Req. Reconsideration-After Non-Final Reject	1011P1203amend09252014. pdf	70454 d308f95e6a8e0726c5d6dee78c98e8a8cda 5bd6b	no	7
Warnings:					
Information:					
2	Extension of Time	1011P1203Ext09252014.pdf	187265 c7b182930db8e119ac148152141ac5a1d23 ea6f8	no	2
Warnings:					
Information:					
3	Letter Requesting Suspension of Action	1011P1203ReqSuspension.pdf	41052 b4488472d7b428387b510574ccb814e729 afe886	no	1
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	32434 fc8d3afa15cb1c3935b8cfb8a1813cb1b489 1a6c	no	2
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