



# **ICEIRD 2<sup>nd</sup> Conference**

**Thessaloniki, Greece**

**24 – 25 April 2009**

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**Welcome to ICEIRD 2<sup>nd</sup>  
Conference**

**Thessaloniki, Greece  
24 – 25 April 2009**



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## INNOVATIVE IDEAS IN THE TECHNOLOGICAL AND BUSINESS INCUBATOR OF UNIVERSITY “POLITEHNICA” OF BUCHAREST

by

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**Why innovative ideas ?**

**Why technological transfer ?**

**Because:**

- “Prosperity comes by innovation“ sustains our contemporary rich

man, the employer of Microsoft , Bill Gates

- In this millennium “key sources for the desired welfare creation depend

upon the creation of new enterprises that shall use technological transfer,

know-how, intellectual property, all these items combined with obtaining

new products and services and their marketing”, sustains David

J. Tacca in



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### Why Innovation and Technological Transfer by Incubators ?

Because:

- The Incubators are the entities, where the incubated ideas are transforming in products, services , knowledge , know-how, and so on

*(the products of innovation);*

- The Incubators are the entities what can to transfer in economy the

*products of innovation;*

- The Incubators can to sustain ,by innovation, the Regional Development ;

- The Innovation and Technology Transfer are a new desideration in this

millennium;

- Today, we are in Thessaloniki, at ICEIRD 2<sup>nd</sup> Conference, for to debate



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**What are the ways and means for to intensify innovation and technological transfer activities ?**

- **An adequate (new) legislation for sustainable of R&D and ITT activities;**
- **A financial support for R&D and ITT activities;**
- **Stimulating of researchers, inventors and protection of intellectual property**



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### **State – of – art in Romania:**

**( during period 2003 – 2007 ) :**

**- we have had three decision of Romanian Government  
(HG 406/2003; HG 128/2004; HG 290/2006 ) for to be creating  
of**

**R& D and ITT entities**

**- 30,000,000.00 EURO for Institutional construction of  
these entities**



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### State – of – art in Romania:

Today we have in Romania:

- 14 Technological Transfer Centers
- 19 Information Technological Centers
- 14 Technological and Business Incubators
- 4 Scientific and Technological Parks

**All these 51 entities, represents the *Romanian Innovation and Technological Transfer Network (ReNITT)***



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**State – of – art in Romania:**

**\* The distribution of Romanian ITT entities:**

- 8 entities in universities (with two TBI in**

**University POLITEHNICA of Bucharest)**

- 19 entities in research institutes**

- 20 entities in private area**





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**NEW** : In 2008 year, in Romania has start a new financial programme for supporting R&D and ITT activities,( POSCCE – A2) for to create :

- spin-off project (max. **200.000€** , for one idea)
- start-up project (max. **200.000€** , for one idea)

\* The budget of this programme is of : **18,500,000 €**

\* **HRTC – TBI** →has, in this moment, the financing for 2 proposals :  
*one spin-off project(HIFETECH) and one start-up project(BRAILLETECH),both, nearly 300.000 Euro*



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### **What is HRTC-TBI ?**

- One ITT entity, part of ReNITT
- Implemented in UPB, Human Resources Training Center
- With the mission: to fast promote of innovation and technological transfer
- Accredited in three domains:
  - machines construction
  - nonconventional energy
  - IT&C



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#### **HRTC-TBI has,today :**

- nearly 1000 sqm ,surfaces for incubation
- 7 members of team (management and consulting)
- 1 IT&C network with 25 local PC work posts
- 3 SME's incubated
- 3 ideas incubated
- 3 research and innovative association and foundation incubated
- 5 national and international projects ( *total budget of 500,000€*)

**NEW:** *From October 1<sup>st</sup> 2009 ,one master specialization, entitled “ The Management of Innovation and Technological Transfer “ today*



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**HRTC-TBI** has, today :

Two technologies incubated and proposed for to be transferred in  
economy, in this or next year:

- **HIFETEH**: Technology to producing concomitantly iron powder and cheap clean hydrogen
- **BRAILLETEH**: Technology to producing books and training materials for the blind persons



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ROMANIA

(19) OFICIUL DE STAT PENTRU INVENTII SI MARCI Bucuresti

(11) Nr. brevet: **106721 B1**  
(51) Int.Cl.<sup>5</sup> C 01 B 3/08;  
C 01 B 3/10

(12) **BREVET DE INVENTIE**

Hotarirea de acordare a brevetului de inventie poate fi revocata in termen de 6 luni de la data publicarii

(31) Nr. cerere: <b>92-200492</b>	(51) Perfectionare la brevet: Nr.
(22) Data de depunere: <b>09.04.92</b>	(52) Diviziune din cererea: Nr.
(30) Prioritate:	(56) Cerere internationala PCT: Nr.
(41) Data publicarii cererii: BOPF nr.	(57) Publicare internationala: Nr.
(42) Data publicarii hotararii de acordare a brevetului: 30.06.93 BOPF nr. 6/93	(58) Documente din studiul tehnicii: US 3017250; 3442620; 3619142
(45) Data publicarii brevetului: BOPF nr.	

(71) Solicitant: (72)
(73) Titular: (72)
(72) Inventori: <b>Stancila Virgil-Corneliu, Stancila Octavian-Nicolae, Bucuresti, RO</b>

(54) **Procedeu si instalatie de producere a hidrogenului**

(57) **Rezumat:** Procedul prevede producerea hidrogenului, prin reactia endoterma, de descompunere a apei in faza de vapori, in prezenta unui agent metalic, reactant pe baza de fier, cuprinzand doua faze, prima de oxidare a agentului metalic cu oxigenul rezultat prin descompunerea apei, iar a doua, de regenerare a acestuia prin reducerea oxidului de fier, format cu gaze de gazogen cu continut de CO. Instalatia este formata dintr-o baterie de pasturi fixe (1 si 2) prin care circula, alternant, unul sau altul din cei doi agenti gazosi, precum si dintr-un ansamblu de distributie alternanta, format din niste conducte (3a si 3b) de introducere a agentului termic si din niste conducte (4a si 4b) de evacuare a hidrogenului ce se obtine, legate prin intermediul unor distribuitoare (5 si 6) alate la conductele (7 si 8), pentru introducerea alternanta a celor doi agenti, cat la conductele (9 si 10) pentru evacuarea hidrogenului rezultat din reactie.

Revendicari: 10  
Figuri: 2

ROMANIA

OFICIUL DE STAT PENTRU INVENTII SI MARCI

**Brevet de inventie**

**Nr. 121605**

Acordat in temeiul Legii nr. 64/1991 privind brevetele de inventie, republicata in Monitorul Oficial al Romaniei, Partea I, nr. 541, din 08 august 2007.

Titular: **STANASILĂ VIRGIL CORNELIU, BUCUREȘTI, RO**

Titlul invenției: **PROCEDEU ȘI INSTALAȚIE PENTRU PRODUCEREA PULBERII METALICE, ASOCIATĂ SAU NU, CU PRODUCERE DE HIDROGEN**

Inventatori: **STANASILĂ VIRGIL CORNELIU, BUCUREȘTI, RO**

Descrierea invenției, revendicările și desenele la care se face referință în acestea, fac parte integrantă din prezentul brevet de invenție.  
Durata brevetului de invenție este de 20 ani, cu începere de la data de 06.12.2004, cu condiția plății taxelor anuale de menținere în vigoare a brevetului.

Confirm cele de mai sus prin semnarea și aplicarea sigilului Director General

București, Data eliberării 28.12.2007

The Romanian patents  
for Hydrogen producing





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Departament Analize, Încercări, Teste  
Laborator de cromatografie de gaze

**RAPORT DE ÎNCERCĂRI**  
Seria: B Nr: 33 D Data emiterii: 07.04.2008

**CLIENT**  
Adresa  
Comanda  
**DENUMIRE PROBA**  
Esantionare  
Prezentare proba  
Data primirii probei

S.C. PROGRES INVENT S.R.L.  
Aleea Faurei, nr. 8, București  
Comanda -/07.04.2008  
Hidrogen  
Efectuata de beneficiar  
Gazoasa  
03.04.2008



#### REZULTATE:

Nr. crt.al încercării	Data/Perioada efectuării	Probă	Determinare	Rezultate	U. M.	Metoda de determinare
G 1	03.04.2008	Proba 1	Oxigen	0,007	%v/v	Metoda operationala NA 4
			Azot	0,43	%v/v	
			Oxid de carbon	< 0,01	%v/v	
			Bioxid de carbon	< 0,01	%v/v	
			Metan	0,033	%v/v	
			Hidrogen	99,51	%v/v	

Nr. crt.al încercării	Data/Perioada efectuării	Probă	Determinare	Rezultate	U. M.	Metoda de determinare
G 2	03.04.2008	Proba 1	Oxigen	0,53	%v/v	Metoda operationala NA 4
			Azot	2,26	%v/v	
			Oxid de carbon	< 0,01	%v/v	
			Bioxid de carbon	< 0,01	%v/v	
			Metan	0,016	%v/v	
			Hidrogen	97,174	%v/v	

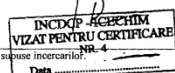
#### CONCLUZII ȘI OBSERVAȚII

Probele au fost analizate prin cromatografie de gaze cu detector cu conductibilitate termica.  
La determinarea continutului de hidrogen nu s-a luat in calcul concentratia vaporilor de apa din probe.

#### Încheierea raportului de încercări

**DIRECTOR DE DEPARTAMENT**  
Ing. Sanda Viorica  
București

**Direktor Departament**  
Dr. chim. Rodica ION



ATENȚIE: Se interzice reproducerea parțială a prezentului document.  
COD: PS-25-F1

Pag. 1/1



S.C. I.C.E.M. - S.A.  
București  
INSTITUTUL DE CERCETĂRI METALURGICE  
Metallurgical Research Institute  
Departamentul 5  
ROMANIA, București, Str. Mehadia nr. 39, Sector 6, cod 060543  
OP17 CP 25  
Tel (021) 2205520 Fax (021) 2204295

BULETIN Nr. 89 data - 17.04.2008

Beneficiar: UNIVERSITATEA POLITEHNICA - CEMS

Comanda : 419/14.04.2008

Data primirii: 16.04.2008

Încercări executate: Analiză chimică

Material încercat: Pulbere metalică feroasă

Condiții de încercare: Conform Normă internă.

Tip epruvetă: pulbere

NOTĂ: Probele au fost prelevate, prelucrate, marcate și puse la dispoziția ICEM de beneficiar

#### Rezultate obținute : (m/m) %

Nr. înreg.	Marcaj epruvetă	Fe tot.	Fe met.
122.	1	90,00	88,80

Precizia măsurătorilor/determinărilor și a rezultatelor este conform standardelor de analiză.

- Aparatură folosită: Balanță.

- Certificate de etalonare nr./Buletine de verificare metrologică nr. CE 14/2006/13 09-0083220/2007.

-Căre expiră la data de - iulie 2008

- Rezultatele prezentate în buletin se referă numai la epruvetele încercate.

- Se interzice reproducerea buletinului în alte scopuri decât cel pentru care a fost eliberat sau reproducerea parțială a buletinului fără acordul scris al ICEM S.A.

-Încertitudinea de măsurare este în limita metodei de analiză standard.

**DIRECTOR DEPARTAMENT 5**

Ing. Angela Gheorghe



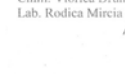
**VERIFICAT**

Chim. Viorica Drumea



**EXECUTAT**

Chim. Viorica Drumea



The laboratory analyses  
bulletin  
for H2 and Fe



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The **HIFETEH** Technology (Romanian patent nr.121605/28.12.2007)

is based on:

- The treatment of the iron ore, at one game of pressures and temperatures ,near 550°C, with a gaseous reducer (furnished by a gas producing);
- The iron/steam reactions(oxidation and reoxidation with steam from usual water):  $\text{Fe} + \text{H}_2\text{O} = \text{FeO} + \text{H}_2$  and  $\text{FeO} + \text{CO} = \text{Fe} + \text{CO}_2$
- The pure hydrogen obtaining (*nearly 99 %*,for utilize in pharmaceutical industry and/or to controllable increase of aquatic flora and fauna)
- The fully reduced iron obtaining ( for special steel production)

*For example : at 1 tone iron ore treated by oxidation and reoxidation, results 1000 Nm3 H2 , at near 70 Euro ( nearby free)*



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The **BRILLETEH** technology(Romanian application form of patenting nr.A/00396/2008) is based on:

- the emitting of sonorous messages adequate of the letters, words or 3D graphical signs of Braille books
- univocal correspondingly with these palpable with fingers hands by the **sightless persons**.
- creating of Audio-Tactile products for the **sightless persons**

### **Statistics for Romania :**

- \* There are nearly 110.000 persons with major sight deficiency
- \* 3 ...4 % of these are schoolchildren or students;
- \* yearly to born 8000-10000 children with major sight deficiency

(source: Romanian National Authority of Handicap Persons)



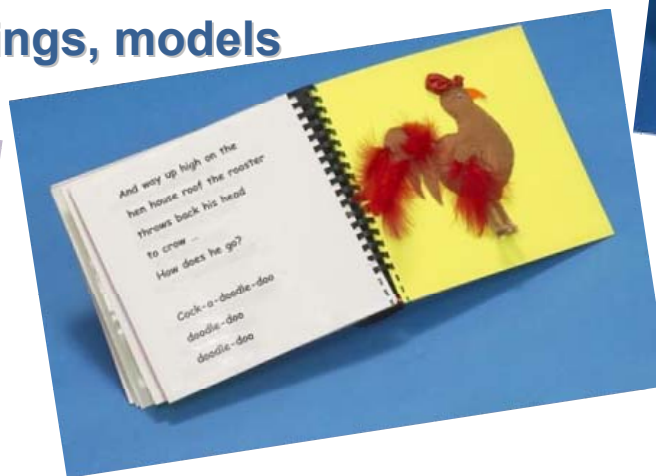




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The **BRILLETEH** products may be:

Books, folders, drawings, models



The Audio-Tactile products are portable products;  
is not necessary one help persons or a guardian.





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### CONCLUSIONS :

- The Technological and Business Incubator (TBI) represents the place where the innovative ideas are realized through product, technology or know—how as a result of research-development activities ;
- From TBI, research results may be transferred to industry and SMEs, like **HIFETEH** and **BRAILLETECH technologies**, in the future ;
- Comprising TBI in national and international networks of ITT, gives it the opportunity to become “the house” where necessary knowledge for development, welfare and general good worldwide may be extracted from;
- By incubating small innovative firms, TBI gives the possibility to “supply” the market with new firms, products and technologies,



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**Thank You**  
**for your attention!**



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**HRTC-TBI : Outside view**  
National historical monument,  
built in 1887<sup>th</sup> year



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**HRTC-TBI : Inside view**  
Secretariate office





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**HRTC-TBI : Inside view**  
**Secretariate office**



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**HRTC-TBI : Inside view**  
Board hall