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GLYCAN ENERGIES PLASMA TECHNOLOGIES MOTORR™

MOTORR PRESENTATION PDF
https://glycan-industries.com/docs/MOTORR.pdf

MOTORR PRESENTATION VIDEO
https://www.youtube.com/watch?v=OdOwBZlq0Po

MOTORR PATENT
https://worldwide.espacenet.com/publicationDetails/biblio?II=2&ND=3&adjacent=true&locale=fr_EP&FT=D&date=20080605&CC=WO&NR=2008064888A1&KC=A1

GLYCAN ENERGIES

The GLYCAN ENERGIES mission was primarily designed to provide energy needs in desert and / or inhospitable regions on Earth or in the context of the Spatial Colonization.

The patented **MOTORR** process uses plasma technologies The process can be coupled to hybrid generators(patent writing), as a hybrid power source for **MOTORR** stations, the process does not require fuels of solid or liquid organic origin.

MOTORR PATENT

Description: WO2008064888 (A1) - 2008-06-05

PROCESS FOR ENERGY CREATION USING PLASMA TREATMENT OF METALS

METAL SALTS AND METALLOIDS AND DEVICE FOR THE IMPLEMENTATION OF SUCH PROCESS

Description of WO2008064888 (A1)

Description

PROCESS FOR ENERGY CREATION USING PLASMA TREATMENT OF METALS, METAL SALTS AND METALLOIDS AND DEVICE FOR THE IMPLEMENTATION OF SUCH PROCESS

Technical field

The present invention relates to a process for treating metal and metal products and metalloids by plasmas for creating energy used in motors or generators. More especially, the products are preferably recycled through successive oxidizations and reductions during the implementation of the process according to the invention.

Background art

The growing needs in energy of the human beings require that a new form of energy production should be found, which should provide clean energy. [0003] Indeed, the use of nuclear energy for example leads to an environmental problematic related to the remediation of the nuclear wastes produced thereby.

Voltages in the field of nuclear fusion, which is supposed to give rise to a huge amount of energy, but which still remains difficult to control. This form of energy is thus still at the stage of a scientific experimentation and is not ready to be implemented as a source.

Disclosure of the invention.

The present invention is a source of energy that can provide a sufficient amount of energy for the environment, and which at the same time may be a clean energy source. Such an energy source according to the invention may be used as a complement to nuclear energy or fuel cells.

For the purpose of the invention, the process according to the present invention, being one of the following steps in providing a supply of metal and metal products, Plasma in the treatment of plasma, plasma and plasma for the plasma of plasma and plasma an exothermic reaction of the latter, in the form of an exothermic reaction, at least part of the released exothermic reaction energy.

Exothermic reaction energy, which includes the inner quantum energy emitted by the exothermic reaction to the changes in the electronic energy levels of the involved parties, for instance, the energy Silicon is used in combination with aluminum, Magnesium, Boron, Zinc, Uranium, can be collected in thermal motors and / or generators.

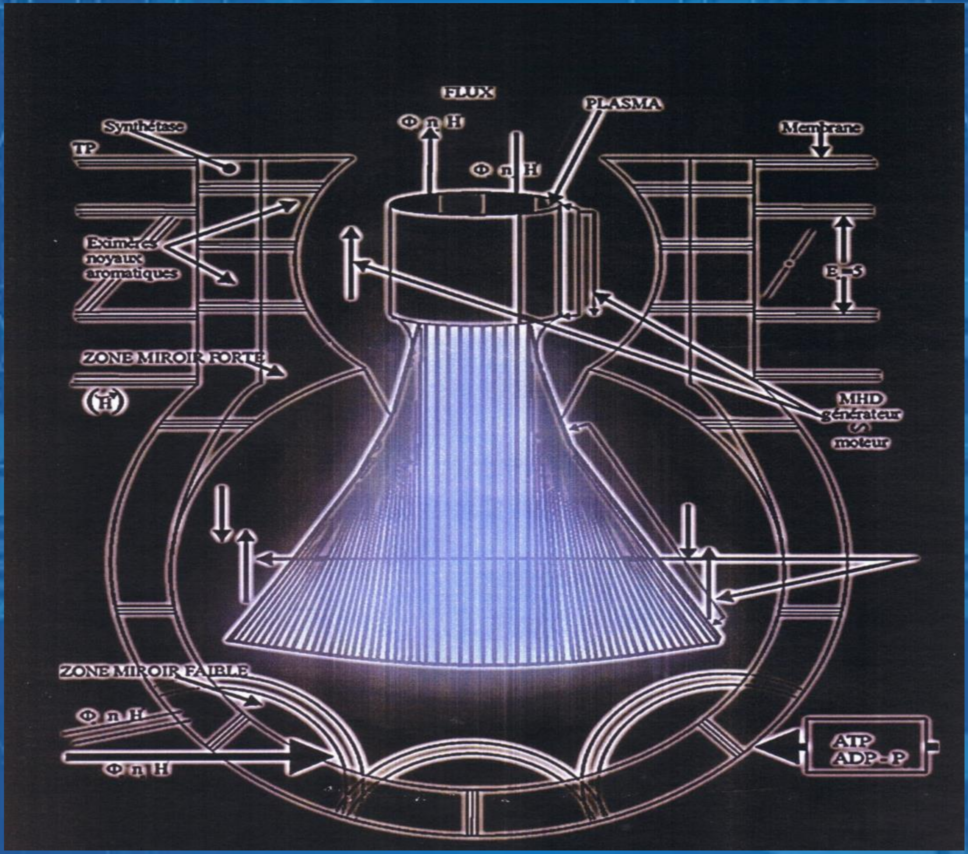
MHD-MGD (Magneto Hydro Dynamics - Magneto)

Gas Dynamics) system for microparticles and nanoparticles before carrying out the exothermic reaction. Such additional step improves the yield, while at least part of the payload of products can be recycled after the exothermic reaction the corresponding metals, metal salts and / or metalloids.

Iron, Aluminum, Zinc, Lanthanides, Yttrium, Magnesium, Boron, Lanthanum hexaboride, Alkalis including Sodium, Potassium, Calcium and Scandium, Silicon, Germanium, Uranium 238 ,

Thorium, Cesium, Platinum Metal Group ("PMG") such as Silver or Platinum. They may be introduced in the treatment circuit in the form of a powder or of a liquid. The present invention is also directed to a device for implementing the above process, the features and advantage as of which will be apparent from the following description. Brief description of the drawings [0011] The appended drawings illustrate, schematically and by way of example, a preferred embodiment of a device for the implementation of the process according to the present invention.

Figure 1 is a schematic view of an exemplary embodiment of a device for implementing the process according to the invention, and [0013] - Figure 2 is a view of a construction detail of Figure 1.



Method (s) for Carrying Out the Invention [0014]

FIG. 1 is a schematic view of an exemplary embodiment of a device comprising a treatment circuit in which the process may be advantageously implemented. [0015] The treatment circuit 1 included an ablation chamber 2 provided with different inputs and intended to generate a plasma to which a payload of products may be mixed.

FIG. 2 represents an exemplary embodiment of the ablation chamber 2 according to a preferred implementation of the invention. The ablation chamber may comprise a plasma generation gas input 4 through which Argon, Helium or Nitrogen for instance may be introduced into the treatment circuit.

[0018] A DC plasma torch 5 may be provided to RF / HF plasma torch 6 for generation of a plasma in the ablation chamber. Further, a CO2 laser 7 may be provided for the purpose of heating a metal can be connected to a metal. powder particles which size is smaller than a predefined value.

[0019] A metallic gaseous solution, usually called a "soil", comprising the plasma gas and fine metal particles is formed in the ablation chamber 2 due to the high temperature gradient that can be increased to 2 <1> OOO to 3,000K . The latter may be connected to a conventional chamber of the same size, which may be more or less limited to a smaller size than a predefined value.

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The generated plasmas may be in a local thermal equilibrium (LTE) state, a local thermal equilibrium (NLTE) state, or a local partial thermal equilibrium (PLTE) state.

They may be generated under a continuous mode and / or under a pulsed mode. Pulsed mode is, however, preferred to continuous mode, in order to avoid overheating of the plasma surfaces of the plasma chambers, the corresponding instabilities of the plasma being negligible compared to the physical advantages of the simplicity of this method.

As previously mentioned, the payload of products provided by the gravity chamber may include metals, metal salts and / or metalloids which may advantageously be taken from the group consisting of Iron, Aluminum,

Zinc, Lanthanides, Yttrium, Magnesium, Boron, hexaboride Lanthanum, Alkalis including Sodium, Potassium, Calcium and Scandium, Silicon, Germanium, Uranium 238, Thorium, Cesium as well as precious metals from the Platinum Metal Group ("PMG") such as Silver or Platinum.

The ablation chamber may receive powders that are inhomogeneous in size and / or composition and that may alternately be introduced by means of pumps or turbines.

Referring back to Figure 1, it appears that the ablation chamber has a higher output. The size of the particle can be calculated with a mathematical program (Beer-Lambert law) coupled to a quantum device for measuring absorption of specific light (R, IR, UV).

Further or alternately, an X-ray diffraction analysis or laser analysis may be provided for particle size analysis in the metallic plasma solution.

The particles, of metals, metals or metalloids (B, Si, Fe, Mg, Zn, U, Th, Ge ...) may advantageously be microparticles, more preferably nanoparticles having an approximate size between 10 and 500nm.

First reacting gases, such as H_2, D_2, N_2, CO_2, Ar, He, N_2O, N_xO_y, CO ... for instance, are introduced in this chamber 12 through poly-injectors to prepare the plasma solution to the following steps of the treatment. For this purpose, the exothermic reactions occur in the first reacting gas chamber 12, to implement a pre-heating of the plasma solution.

The plasma is then conducted through an accelerating system 14 the purpose of which is to force the plasma to move forward in the treatment and increase the rate of nanoparticles in the metallic plasma solution. In the preferred exemplary embodiment as represented, the accelerating system is a MHD-MGD system that can be of any suitable shape, advantageously torroidal as described in PCT application / EP2007 / 000676 for instance.

Indeed, the torroidal shape of the MHD-MGD system allows a better control of the timing of the plasma temperature.

[0027] Alternately, a turbine system may replace the MHD-MGD system, such mechanical systems being substantially more exposed to wear in the corresponding conditions of use.

[0009] It should be noted that the pulsed mode of plasma cannot be used in any part of the treatment circuit. It may be used in the ablation chamber 11 and in the MHD-MGD 14 system however.

The treatment circuit included then a relaxation chamber or sphere 16 in which the heaviest metal particles are filtered by gravity to be removed from the metallic plasma solution before going further into the process.

A turbine tesla 17 may be provided to accelerate the plasma when necessary if the MHD-MGD system is not sufficient.

The plasma enters then an ignition chamber 18 in which further reacting gases are introduced into an exothermic reaction. In a first cycle, oxidizing gases may be introduced as such, which may be diluted in 10 or 700ms. The metals, metal salts or metalloids being oxidized, the corresponding reaction may be highly exothermic.

Other suitable oxidizing gases may include O3, CO2, NxOy ... and the one skilled in the art will not meet any particular difficulty in choosing a suitable gas with respect to its specific needs, without going beyond the scope of the present invention.

The metallic particles may be at a temperature between

380 <0> C and 780 <0> C when arriving in the ignition chamber 18, the ignition temperature being between 800 <0> C and 95 0 <0> C, depending on the products to be treated. The ignition time may be between 500 and

1 '250ms as a function of the products to be treated.

The oxidized metallic plasma solution then goes through an analyzing station 20 for conducting a plasma diagnosis. The analyzer may include any suitable analyzer system encompassing conventional spectroscopic techniques such as ICP-AES (ICP-AES: Inductive Coupled Plasma-Atomic Emission Spectroscopy),

ICP-MS (ICP-MS: Inductive Coupled Plasma-Mass Spectroscopy), AAS (AAS: Atomic Absorption Spectroscopy) for the natural elements (metals) and by GC-MS (GC-MS: Gas Chromatography - Mass Spectroscopy) techniques for molecules.

The energy released by the exothermic reaction is collected in a collector 21 and can be directly used in thermal motors and / or generators.

Next, the plasma is recycled through a recycling loop 22 including a cryozone 23 which may cool down the plasma temperature when required.

[0038] An emergency output 24 may also be provided in the treatment circuit 1, to allow a rapid removal of the products, possibly by activation of the tesla turbine, in case of a dysfunction of the treatment circuit.

The plasma is then recycled through the processes of the first stage of the process, with the difference that the reacting gases used in the first reacting gas chamber 12 and in the ignition chamber are as follows,

H_2, D_2, CO ... for instance, in the form of a metal salt or metalloid particles.

These latter can be used in a more efficient way, by the first reaction, or through the first reaction, through the MHD-MGD system 14.

[0041] Where Silicon (or Germanium) is used in combination with other metals such as Aluminum, Magnesium, Boron, Zinc, Uranium, a corresponding energy transfer and / or generators. Indeed, it is known that it is irradiated with luminous energy (Silicon releases electrons and those that are released by the plasma).

The microparticles, more preferably the nanoparticles, may be reduced and oxidized as many times as necessary.

Therefore, only one of the following can be necessary to keep the process active across the world. Addition of some product may be necessary for the loss of material deposited on parietal areas of the plasma chambers (MHD-MGD system). Typically, a payload may have a weight between 2Og and several kg or even tones, depending on the power which has to be released.

Temperature probes may be provided in the same manner in the first reaction chamber 12, in the MHD-MGD system and in the ablation chamber 2 to measure a macroscopic temperature of the products to be treated. The average temperature can be calculated for the plasma using the Griem criteria, for instance, together with the diagnostics that are carried out in the analysis station 20, through means of RF induction and conventional resistive methods (Carbon I line at 2'478,556 Angstrom Argon neutral lines at 4,300 Angstrom and at 4,158.39 Angstrom).

It should be noted that Ln3 + (Lanthanides), Alkali (Li, K, Na, Ca, Cs ...) and BN3 (Boron Nitride), thus the LTE is stressed and the temperature is reduced to near the plasma shutoff. Therefore, the parietal zones are protected, even if the MHD-MGD system efficiency is substantially diminished. The plasma temperature is quite adapted to recycle externally the gases (via tesla turbine 17) to replace the loss of plasma or plasma kinetics.

The present invention is also directed to a device, or treatment circuit, for the implementation of the above described process. The features of this device appear from the above detailed description of the drawings.

From a practical point of view, the dimensions of the treatment circuit depend on the quantity of energy released.

For instance, concerning the ablation chamber 2, it may be more than one meter diameter for supply units intended for boats or for factories. For smaller supply units, it may be smaller than one meter in diameter but should be larger than 0.2 meter.

The gravity chamber 9 may have a volume between 1 and 30 liters while the first reacting chamber may have a diameter between 0.2m and several meters.

The MHD-MGD system may be torroidal, according to a preferred exemplary embodiment. The torus may have a diameter between 0.3m and several meters with cross sections between a few centimeters and a few tens of centimeters.

[0052] Regarding the relaxation chamber 16 and the ignition chamber 18, each having a diameter between 0.2 meter and several meters.

The features of the process for energy creation and the processing circuit for its implementation are described in this description in a non-limiting manner. More especially, the given examples are non-limiting. The skilled person in the art will have no difficulty in adapting the invention to the present invention.

It should be noted that the invention may be carried out either on earth or for conducting exo-metallurgy on other planets. It can also be implemented for energy transfer in space and ground propulsion.

The gases to be used may be extracted from the ground of such planets, for example if the planet atmospheres do not include the necessary gases to generate plasmas. The present invention can be used to treat and destroy highly toxic molecules, as described in PCT / EP2007 / 000676, already mentioned. It could also be implemented to refine precious metals.

Patent:
https://worldwide.espacenet.com/publicationDetails/description?CC=WO&NR=2008064888A1&KC=A1&FT=D&ND=3&date=20080605&DB=&locale=fr_EP#

AMERICAN INSTITUTE FOR QUANTUM SCIENCES AND PLASMA TECHNOLOGIES

https://aiqspt-quantum-sciences.com/

Non Profit Organization Corp.[501c3]- C3923726 CA
SS-4 – EIN :36-4905040
5405 Alton Parkway , suite A 313
IRVINE, CA 92604
1 888 439 22 48
1 949 939 83 52
1 313 461 8455

Geneva, Switzerland
0041 22 700 58 73
0041 79 213 77 18

Contact us at:

(USA)
Michael D'Arcangelo
MichaelGlycanSpace-XR@glycangroup.com
(313) 461-8455

(USA)
Georgia Markoul
Georgia-Markoul@glyangroup.com
(248) 417-5249

(Switzerland)
Professor Christian Daniel Assoun
GlycanSpaceXR-Heliotorr@glycangroup.com
00 41 22 700 58 73