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(54) Title: CREATION OF ORTHOHYDROGEN, PARAHYDROGEN AND ATOMIC HYDROGEN

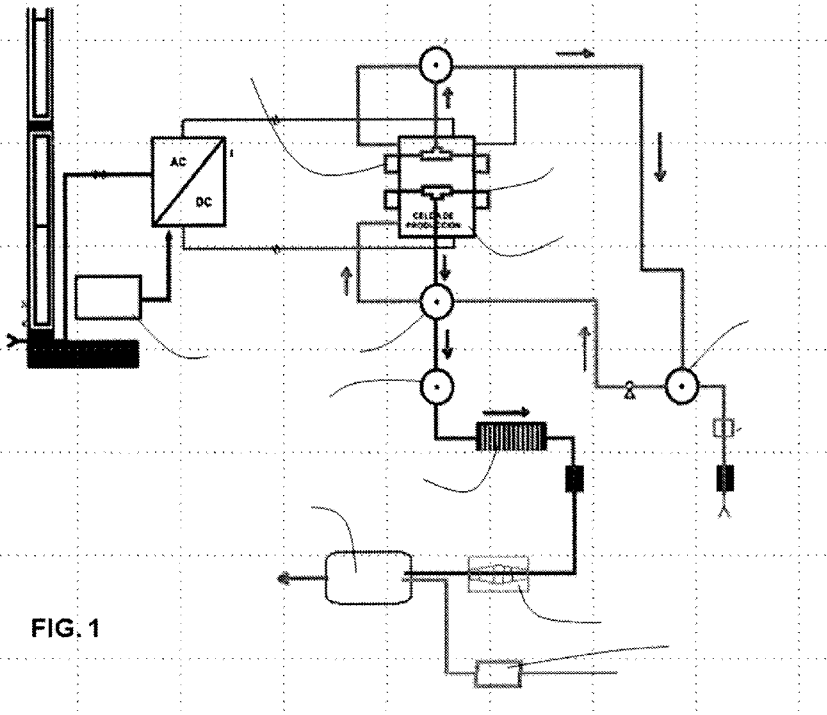


FIG. 1

(57) Abstract: A system, method, and apparatus for the creation of parahydrogen and atomic hydrogen, and for mixing of atomic hydrogen with gas for fuel are disclosed.

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AMENDED CLAIMS

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Listing of Claims:

1. A system for converting orthohydrogen into parahydrogen, converting parahydrogen into atomic hydrogen, and for mixing converted atomic hydrogen with a combustible gas, comprising:
 - a water supply;
 - a hydrogen production cell, wherein water from the water supply is cleaved into hydrogen and oxygen atoms by electrolysis and orthohydrogen is converted into parahydrogen;
 - a water trap and filter, wherein trace water is separated from parahydrogen;
 - a magnetic reactor, wherein parahydrogen is converted into atomic hydrogen; and
 - a mix tank, wherein atomic hydrogen is mixed with a combustible gas.
2. The system of claim 1, wherein the hydrogen production cell comprises two or more microcells connected together in series, and wherein each microcell comprises a plurality of electrodes, a hydrogen output, and an oxygen output.
3. The system of claim 2, further comprising a power controller for sending electric pulses into each microcell during electrolysis to make at least one electrode positively charged and at least one electrode negatively charged.
4. The system of claim 2, further comprising a plurality of sets of coils, wherein a set of coils is positioned at the hydrogen output of each microcell and each of the plurality of sets of coils are adapted to apply a vibrational frequency to hydrogen exiting through the hydrogen output of each microcell during electrolysis.
5. The system of claim 4, wherein the plurality of sets of coils are adapted to apply a vibrational frequency that is about equal to the natural frequency of parahydrogen.
6. The system of claim 3 further comprising a plurality of power transistors for regulating the electric pulses sent into each microcell, wherein a power transistor is assigned

to each microcell and each of the power transistors are adapted to communicate with the power controller to either permit or prevent the electric pulses sent to the microcells.

7. The system of claim 1, wherein the magnetic reactor comprises a tube, three permanent magnets, and two wire coils wrapped around the outside of the tube that are connected to an oscillator.

8. The system of claim 7, wherein the tube is cylindrical and constructed of a nonmagnetic material, and wherein the three permanent magnets are located inside the tube and are oriented in the same direction.

9. The system of claim 8, wherein the three permanent magnets are all radial magnets of uniform size and shape, each having a center hole about $1/3$ of the total diameter of the tube.

10. The system of claim 7 wherein the oscillator produces a frequency of about 1.98 kHz up to and including about 2.75 kHz.

11. The system of claim 1 wherein the combustible gas is oxygen gas or methane gas.

12. A method for converting orthohydrogen into parahydrogen, converting parahydrogen into atomic hydrogen, and for mixing converted atomic hydrogen with a combustible gas, comprising the steps of:

feeding water from a water supply into a hydrogen production cell, wherein the hydrogen production cell comprises one or more microcells connected in series;

pulsing electric current into the one or more microcells to enable electrolysis in the hydrogen production cell whereby water molecules are broken down into molecular hydrogen and molecular oxygen, wherein the molecular hydrogen is part orthohydrogen and part parahydrogen;

passing the molecular hydrogen through one or more sets of coils, wherein a set of coils is positioned at the hydrogen output of each of the one or more microcells and wherein a

vibrational frequency is applied inside of the each of the one or more sets of coils to convert orthohydrogen into parahydrogen;

passing the parahydrogen through a magnetic reactor, wherein the magnetic reactor converts the parahydrogen into atomic hydrogen; and

mixing the atomic hydrogen with a combustible gas to create a mixed gas fuel.

13. The method of claim 12, wherein the step of pulsing electric current into the one or more microcells is stepwise such that pulses are applied one-by-one to each of the one or more microcells in a progression through the one or more microcells connected in series.

14. The method of claim 12, wherein the electric current is pulsed into the one or more microcells at a frequency of about 4 Hz up to and including about 10 Hz.

15. The method of claim 12, wherein the vibrational frequency applied inside of the first set of coils positioned at the hydrogen output of each microcell is about equal to the natural frequency of parahydrogen.

16. The method of claim 12, wherein the magnetic reactor comprises a cylindrical tube constructed of nonmagnetic material, a plurality of radial magnets that reside inside of the cylindrical tube and that are all magnetically oriented in the same direction; and a plurality of wire coils wrapped around the tube that are connected to an oscillator.

17. The method of claim 15, wherein the oscillator produces a frequency of about 1.98 kHz up to and including about 2.75 kHz.

18. The method of claim 12, wherein the combustible gas is methane gas or oxygen gas.

19. A method for converting orthohydrogen into parahydrogen, converting parahydrogen into atomic hydrogen, and for mixing converted atomic hydrogen with a combustible gas, comprising the steps of:

feeding water from a water supply into a hydrogen production cell, wherein the hydrogen production cell comprises a plurality of microcells connected in series;

sending sequential electric pulses into each one of the plurality of microcells such that two microcells will never receive electrical pulses at the same time and whereby water molecules in each one of the plurality of microcells are broken down into molecular hydrogen and molecular oxygen, wherein molecular hydrogen is present as orthohydrogen and parahydrogen;

separating the molecular oxygen and the molecular hydrogen;

passing the molecular hydrogen through sets of coils, wherein a set of coils is positioned at the hydrogen output of each one of the plurality of microcells;

applying a vibrational frequency about equal to the vibrational frequency of parahydrogen inside each one of the plurality of coils, whereby the molecular hydrogen is converted into solely parahydrogen;

passing the parahydrogen through a magnetic reactor;

the magnetic reactor converting the parahydrogen into atomic hydrogen; and

mixing the atomic hydrogen with a combustible gas to create a mixed gas fuel.