US 20230232522A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2023/0232522 A1

Burgener, II et al. (43) Pub. Date: Jul. 20, 2023

(54) PULSE ENERGY GENERATOR SYSTEM

(71) Applicant: **Ken Gen Energy, LLC**, Murray, UT (US)

(72) Inventors: **Robert H. Burgener, II**, Park City, UT (US); **Shane L. Luke**, Heber City, UT (US); **Troy Berneck Atkin**, Payson, UT (US)

(21) Appl. No.: **18/098,820**

(22) Filed: **Jan. 19, 2023**

Related U.S. Application Data

(60) Provisional application No. 63/300,936, filed on Jan. 19, 2022.

Publication Classification

(51) **Int. Cl.**

H05H 1/48 (2006.01)

H05H 1/46 (2006.01)

(52) **U.S. Cl.**

CPC ***H05H 1/48*** (2013.01); ***H05H 1/4645*** (2021.05); *H05H 2242/22* (2021.05); *H05H 2242/24* (2021.05)

(57) **ABSTRACT**

Energy is generated from pulsed electric power sources applied to a gas medium that includes hydrogen. A sealed reactor chamber contains hydrogen. A plasma power supply, such as a DC, AC, or RF power supply, generates a plasma inside the chamber. The pulse energy generator systems use pulsed electric power for the conversion of molecular hydrogen into atomic hydrogen. An inner surface of the reactor chamber is coated with a catalyst to facilitate the reformation of molecular hydrogen from atomic hydrogen under conditions that release excess energy. The catalyst may include tungsten, nickel, titanium, platinum, palladium, and mixtures thereof. A plasma pulse controller connected to the plasma power supply turns the power supply on and off to generate plasma pulses inside the reactor chamber. A pulse time duration may range from 1 nanosecond to 1 millisecond and a dead time between pulses may range from 20 milliseconds to 0.3 seconds.