FM Journals

Frontiers Journal of Renewable energy

One sort of DC generators without reversing and hydrogen production equipment's

[1]Ziwei Chen*, [2]Shihao Chen

[1]Beijing Jiaotong University, China
[2]Northeast Normal University, China

Abstract:

It had been presented that a sort of DC generators without reversing and a sort of hydrogen production equipment's based on a more accurate understanding of the laws of electromagnetic induction. The production of hydrogen requires direct current. The intensities of wind and solar energies varies randomly. Hence it is necessary to use wind and solar energy to directly produce direct current (without reversing), and can produce hydrogen when direct voltage vary arbitrarily. The generator has the following characteristics. The main elements of the DC generator (motor) without reversing are: two ring-shaped magnets whose magnetic field direction is perpendicular to the ring surfaces, a magnetic conductive plate which is made of high permeability magnetic material, provided with holes through which a conducting wire can pass. A wire passes through the holes many times, twined around the magnetic conductive plate, is perpendicular to the direction of magnetic field, and is between the two parallel magnets. Wind power drives the magnets to rotate so that the wire moves to cut magnetic field lines. As a result, a DC electromotive force is generated at both ends of the wire. The photoconductive effect of liquid is fully exploited in the hydrogen production equipment's. The efficiency of the sort of DC generators is high, and it has simple structure, low cost and long life.

Biography:

Ziwei Chen is an associate professor of Electronic Engineering at Beijing Jiaotong University. She got her master and PhD degree from Institute of Electronics, Chinese Academy of Sciences. Her research interests are green energy devices, signal processing and image processing of radar system.