Fuel Cell Applications on Electric Bicycle and Uninterruptible Power Supply

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ABSTRACT

In this paper, propose fuel cell application on electrical product environment, we choose E-Bike and Uninterruptible Power System （UPS） do prototype. The fuel cell system is composed of a 200W proton exchange membrane fuel cell stacks（PEMFCs）, metal hydride canisters, air fans, solenoid valves, temperature sensors, manual regulator and a time controller to exhaust gas. All components are commercially available. The fuel cell system is installed on a commercial electric bicycle and uninterruptible power supply. Results show that the performance of the fuel cell system can extend the travel distance of the electric bicycle and the work time of the uninterruptible power supply respectively. The design, fabrication, and testing of a prototype of electric bicycle powered and uninterruptible power supply by fuel cell system is reported. In the future, we ’ll toward develop high power product of the fuel cell system, and to build partnership with company to promote fuel cell industry development quickly.

Keywords : Fuel Cell, E-Bike, UPS, Metal Hydride Canisters

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