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DISEÑO Y CONSTRUCCIÓN DE UN GO-KART HÍBRIDO PILA DE COMBUSTIBLE PEM /
BATERÍA RECARGABLE

Revista Internacional de Contaminación Ambiental, vol. 24, núm. 4, 2008, pp. 183-189
Universidad Nacional Autónoma de México
Distrito Federal, México

Available in: <http://www.redalyc.org/articulo.oa?id=37011665004>

Abstract

An hybrid Polymer Electrolyte Membrane Fuel Cell, PEMFC-Rechargeable Battery Go-kart has been designed and manufactured using AutoCAD software for the design and a CNC mechanical machine for the manufacture of components of the fuel cell. The membrane-electrode assemblies, MEAs, were integrated with a Gore-Select membrane and carbon cloth with Pt (20 wt % /C) 0.5 mg/cm² anode and cathode electrode catalysts loading. High density graphite collector plates with 5mm thickness were used as collector plates. The estimated weigh of the go-kart with a driver is about 120 kg. The demand of the motor of the go-kart is 20 V and 5 A (100W), supplied by an hybrid system integrated by three 30Watts PEMFC. The commercially available Pb/acid rechargeable battery supplies energy for peripheral equipment.

Keywords

Proton exchange membrane (PEM) fuel cell, hydrogen, clean energy.