

Title (en)  
SEALED BATTERY AND METHOD OF OPERATION

Title (de)  
ABGEDICHTETE BATTERIE UND VERFAHREN ZU IHRER BENUTZUNG

Title (fr)  
BATTERIE A BAC HERMETIQUE ET PROCEDE DE FONCTIONNEMENT

Publication  
**EP 1027745 A1 20000816 (EN)**

Application  
**EP 98946048 A 19980911**

Priority  
• US 9819023 W 19980911  
• US 5855797 P 19970911

Abstract (en)  
[origin: WO9913523A1] A sealed rechargeable battery affords the advantages of both vented batteries and sealed batteries while avoiding the disadvantages of each. Power cells (12) constitute a rechargeable energy source. Regulator cells in the form of metal-hydride cells (18) operate in tandem with the power cells. A hydrophobic barrier separates the power cells from the metal-hydride cells, and prevents migration of water and electrolyte, but allows the migration of gases such as hydrogen and oxygen between the two sets of cells. A voltage stabilizer (14) monitors the metal-hydride cells via a programmed microprocessor (16). By detecting the direction and amount of current flowing through the metal-hydride cells, the voltage stabilizer monitors the operation of the power cells. When current flows in one direction, oxygen is produced by the power cells and absorbed or consumed by the metal-hydride cells. When current flows in the opposite direction, hydrogen is consumed. By applying certain voltages to the metal-hydride cells, the voltage stabilizer controls their operation to enhance the performance of the power cells.

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