EFFECTIVE THERMAL DISSIPATION OF CARBON GRAPHITE FOAM ON NIMH BATTERIES FOR EV USE

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It is important to minimize the temperature difference between cells in multi-cell battery systems because when a temperature difference occurs some cells can run at higher or lower voltages. To keep a Nickel Metal Hydride battery pack at uniform temperature, it is placed in a plate of porous carbon graphite foam. Carbon graphite foam is a highly thermally conductive material. Cell capacity and temperature variations are measured under a range of environmental and electric load conditions; this includes different ambient temperatures, varying charge and discharge rates, and levels of airflow. Batteries were also vibrated to simulate road conditions and to determine the structural stability for an electric vehicle.