

**5646509****BATTERY CAPACITY TEST AND ELECTRONIC SYSTEM UTILIZING SAME**

Berglund Neil C; Rosedahl Todd J; Steele Steven W  
Kasson, MN, UNITED STATES assigned to  
International Business Machines Corporation

A battery capacity test and electronic system implementing the same tests both the high and low discharge capacities of a back-up battery to ensure that the battery is capable of handling both a short term, high discharge load and a long term, low discharge load. The battery capacity test is particularly suitable for use in an electronic system which, upon occurrence of a power outage, converts from an operational mode to a power saving mode during a conversion time. High discharge capacity testing is performed using a safety net where the primary power source of the electronic system is switched to a reduced testing voltage output, rather than shut off or disconnected, so that the primary power source can take over quickly in the event of a back-up power supply failure during the test.

**5646534****BATTERY MONITOR FOR ELECTRIC VEHICLES**

Kopera John J C Rochester Hills, MI, UNITED STATES assigned to Chrysler Corporation

A battery monitor for monitoring the voltage and temperature of the batteries associated with a battery pack of an electric vehicle. The battery monitor includes an opto-isolator that electrically separates an isolated portion of the battery monitor connected to the batteries from a non-isolated portion of the battery monitor that transmits battery voltage and temperature signals to a vehicle controller of the electric vehicle. The battery monitor is positioned proximate to a battery tub holding the batteries of the electric vehicle so that high voltage wires connected to the batteries within the battery tub are limited in length for safety purposes. Further, a limited number of wires transmitting the battery voltage and battery temperature signals from the battery monitor to the vehicle controller are required. The battery

monitor can include a multiplexer that selectively transmits the battery voltage and temperatures signals to the opto-isolator in a controlled manner, or can include a series of other opto-isolators that transmit high power battery signals to a capacitor to be charged where the charge on the capacitor is representative of the voltage of a particular battery.

**5646825****COOLING DEVICE FOR COOLING ELECTRIC AND ELECTRONIC COMPONENTS AND BATTERIES IN A SWITCH CABINET**

Huttenlocher Werner; Knoblauch Harald Calw  
Stammheim, GERMANY assigned to Otto Pfannenber  
Electro-Spezialgeratebau GmbH

The cooling device serves for the cooling of electric and electronic components and of batteries in a switch cabinet, in which case in a housing of the cooling device, a first heat exchanger for the formation of a first cooling system for the chamber accommodating the electric and electronic components and a second heat exchanger for the formation of a second cooling system that is independent of the first cooling system for the chamber accommodating the batteries are disposed, wherein both heat exchangers are supplied from a common compressor.

**5648714****METHOD AND DEVICE FOR CHARGING AND CONDITIONING BATTERIES**

Eryou Douglas F; Federman Vladimir Winnipeg,  
CANADA assigned to Manitoba Ltd

A battery charging and conditioning circuit is provided wherein application of a charging current to a battery is alternated with the application of short current spikes. The impedance characteristic and no load voltage characteristic of the battery are monitored and processed to select the charging current and spiked current applied to the battery. Processing of the impedance characteristic and no load voltage characteristic of the battery is made by a processing unit. The circuit used to generate the