

METHOD AND APPARATUS FOR BATTERY CHARGING

ABSTRACT

A rechargeable battery is charged by connecting the terminals of the battery to an electrical power source. In order to avoid overcharging and undue temperature increase in the battery cell, the course of at least one charging parameter is surveyed during at least part of the process of charging the battery. This charging parameter surveyed is compared with a number of reference parameter courses representing idealistic or desirable processes of charging the battery for different starting states of the battery. In order to determine the starting state of the battery and thus selecting a reference parameter course, the battery may initially be test charged for at short period of time and subsequently test discharged for another short period of time. The comparisons may for example be made by means of a microprocessor, which may also select the reference course. Thereafter the process of charging the battery may be controlled so as to approximate the course of said charging parameter to the selected reference course. The invention also relates to a method of determining characteristic parameters of the battery which may be used to control a subsequent charging process. Such characteristic parameters may be the capacity of the battery, the maximum charging temperature and the maximum charging voltage. The invention further relates to a battery and a battery system wherein the battery may comprise information means for storing battery information. Such information means may for example be an electronic memory or a microprocessor.

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