

ABSTRACT

A METHOD AND AN APPARATUS FOR CHARGING A RECHARGEABLE BATTERY

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, such as the increase rate of the voltage, 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 charge of the battery. Such comparisons may for example be made by means of a microprocessor, which may also select the reference course with a starting state of charge similar to the actual starting state of charge of the battery. 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 charging voltage may be limited to a maximum value (V_{max}). When such value has been reached the charging process may be terminated after a certain predetermined time period being one of the reference values.

(Figure 5)