ABSTRACT

Batteries are part of life nowadays. For maintaining lead-acid battery performance, they need battery monitoring system for estimating State of Charge (SOC) on the batteries, so when they are operated, batteries do not suffer harmful or destructive condition. This research is conducted to design battery monitoring system for monitoring battery state of charge that can avoid battery becoming overcharged and overdischarged. System made of cellboard and current sensor for monitoring voltage and current of the battery. The current that is calculated every unit time refers to charge. The charge is proportional to the SOC and then SOC is represented with voltage. On this research, writer got battery charge total 8,4728 Ah on charging cycle and 8,9061268 Ah on discharging cycle. These are quite far away from the battery's rated capacity, 12 Ah. These also prove that the battery charge has been reduced from the rated capacity.

Keyword : battery monitoring system, lead-acid battery, coulomb counting method, state of charge