Estimation of Lead Acid Battery Capacity using Pulse Voltammetry Cyclic and Neural Network Method

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Abstract

The requirement for a reliable battery that holds a very important role. Therefore, this study refers to the characterization of lead acid batteries, this type is a secondary battery of the most developed and the lead acid batteries are widely used in the automotive field. The lead acid battery capacity is determined by the amount of electrical charge that is obtained from the battery and the amount depends on the active ingredient contained in the plate. To determine the characterization and capacity lead acid battery is good and suitable for use, this study used two methods. There are voltammetry analysis and development the lead acid battery model design based on neural network method. In the electrochemical field the voltammetry cyclic is a condition when the current is measured during a sweep potential from the beginning to the end potential and then back again. It is also called sweeping or scanning and can be reversed after the reduction takes. So the anodic and cathodic current can be measured. Then the design of the model development lead acid battery based on neural network in this study using inputs spesifically the voltage as input, and the current as target. So the accuracy testing of the
forecasting system using neural network algorithm will be better and more efficient than the experiment data manually.

References


Index Terms

Computer Science  Artificial Intelligence

Keywords

Lead Acid Battery, Neural Network, Voltammetry cyclic.