

Study of the lead-acid accumulator internal resistance variation

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Abstract Internal resistance is one of the lead-acid accumulator parameters which varies during accumulator operation. For an accurate prediction of the voltage of the lead-acid accumulator acting as energy storage unit in stand-alone renewable energy systems, the internal resistance variation under specific condition of operation must be considered. In this paper experimental results regarding internal resistance variation of a lead-acid accumulator are reported. These data are useful in order to develop an equation for the internal resistance variation under typical operating conditions of the lead-acid accumulator acting as energy storage unit in stand-alone renewable energy systems. This equation is an integral part of the model of the lead-acid accumulator.

Keywords: Internal resistance, lead-acid accumulator, renewable energy systems.
