

A Method of Internal Resistance Estimation by Measuring Ripple During Charging for Traction Battery

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We developed a method for calculating internal resistance using RMS values of ripple voltage and current in charging process of a traction battery. Since the ripple voltage and current contain many frequency components, we built frequency filters to measure required components. The internal resistance calculated by the developed method was found to be in good agreement with the value calculated using the main frequency components of ripple. The results showed the effectiveness of the developed method using frequency filter and RMS value meter which are small and inexpensive devices.