Test Results of a High Capacity Wayside Energy Storage System for DC Electric Railway at New York City Transit

Koki Ogura
Kyushu Sangyo University, Fukuoka, Japan

Abstract:

Over the past several years, mass transit systems have been facing increasing demands on their power systems. This is due to the several factors: increased ridership, growing overall demand for power and limited expansion of power generation facilities due to environmental concerns. Finding the solutions for these problematic factors has increased the demand for additional power sources at minimal cost, an ability to recycle the regenerative braking energy created by braking trains and line voltage stabilization. These demands have been successfully addressed in a project that tested a directly connected high capacity nickel-metal hydride (Ni-MH) battery developed by Kawasaki. These controlled tests were conducted at the New York City Transit (NYCT).

This presentation provides the results of the tests on the Battery Power System (BPS) using Ni-MH batteries at the Far Rockaway and Manhattan locations in the New York City Transit system.