

**Evaluation of Characteristic of the Linear Motor Type Rail Brake  
Using an Electrical Equivalent Circuit**

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One type of braking system for railway vehicles is the eddy current brake. Because this type of brake has the problem of rail heating, it has not been put to practical use in Japan. Therefore we have proposed to use a linear induction motor (LIM) for dynamic braking in the eddy current brake system. It uses an inverter for the self-excitation function and reduces rail heating. In this paper, we estimated the performance of a LIM from an electrical equivalent circuit of a fundamental test machine, and confirmed that the LIM under constant current excitation has an approximately constant braking force regardless of frequency for relatively low frequencies, and the generated power is approximately proportional to the frequency.