

Development of Inverter-less Excitation Method for a Linear Rail Brake

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Studies have been carried out on rail brakes applying linear induction motor technology. This brake is capable of generating braking force without contact. In addition to the aspect of non-contact brakes, no on-board power supply for energizing this brake is required by using dynamic braking. This dynamic braking is performed with an excitation inverter, however another method without using one is desired in order to reduce the cost. Therefore, an inverter-less excitation method using the self-excitation phenomenon of induction generators was devised and tested on a track wheel testing machine. We clarified that the method devised is useful as a low-cost excitation system.