Development of A Rail Brake Derived from Linear Motor Technology

Yasuaki SAKAMOTO Takayuki KASHIWAGI

Takashi YONEYAMA Shin-ichi SAGA

Studies have been carried out on a rail brake developed by applying linear induction motor technology, called LIM-type rail brake. This brake is capable of generating braking forces without contact. In addition, this method decreases the rise in rail temperature, and no on-board supply of electric power is required by using dynamic braking. It is however necessary to install this brake in the limited space between front and rear wheels of the bogie. A prototype rail brake system was designed and built and its electromagnetic characteristics were examined on a test track in RTRI. These investigations revealed that the LIM-type rail brake could be applicable for practical use.