

## **Effects of Electrical Gap Reduction on the Design of Ground Coils and Superconducting Magnets**

Takenori YONEZU      Ken WATANABE  
Erimitsu SUZUKI      Takashi SASAKAWA

In the case of designing the superconducting Maglev vehicle system, the electrical gap (lateral distance between the center of the conductor of the superconducting coil and that of the ground coil) has been treated as a constant value. However, by using onboard REBCO (rare-earth-barium-copper-oxide) HTS (high temperature superconducting) magnets which are being developed, the electrical gap can be reduced, and the electrical gap can be treated as a variable parameter. The vehicle system can be designed more freely than the conventional system. A fundamental study on the effects of electrical gap reduction on the design of ground coils and superconducting magnets is described in this paper.