

**Development of Efficient Non-contact Insulation Diagnosis
for the Propulsion Coil of the Superconducting Maglev**

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Superconducting maglev systems require ground coils along the entire track. The performance stability of the ground coils has a large effect on the stability of the system. When a vehicle runs, a high voltage is applied to the propulsion coils (a type of ground coil). The propulsion coils should be inspected periodically to evaluate insulation performance in the same way as the general high voltage equipment. In this paper, the authors focus on the electromagnetic waves of the UHF band that is emitted from the propulsion coil with insulation failure. For efficient diagnosis, the authors have verified the possibility of high-speed measurement.