

**Analysis Method and Abatement Measure of Electric Magnetic Fields
Emitted from Electrified Railway Substations**

Gaku MORITA Tetsuo UZUKA
Takashi SASAKAWA Syun-ichi SUGAI

Recently, electromagnetic environment and electromagnetic compatibility (EMC) around electric equipments have become important issues. The major frequency components of the electric magnetic fields emitted from those electric equipments are low frequencies, by which we mean DC and commercial power frequencies in this paper. Many theoretical studies and test measurements for power system emitting electromagnetic fields were carried out by the power supply companies. However, there have not been enough studies on railway fixed installations, particularly on railway substations. This paper describes the physical characteristics and analytical methods of low frequency electromagnetic fields generated in railway substations. And also, this paper proposes abatement measures and model substation designs based on the above results.