

**Study of the Loss by the Proximity Effect of the Conductor
in Contactless Power Supply Coils**

Takayuki KASHIWAGI Hitoshi HASEGAWA Yoshihito KATO
Yasuaki SAKAMOTO Keigo UKITA

The contactless power supply system has high degree of safety and a feature of being maintenance free, because the current-carrying part is insulated and has no mechanical contact. On the other hand, transmission efficiency is low and its improvement is very important. The losses of the system mainly proceed from the power converters and the electrical power supply coils. In this paper, we focus on the loss caused by the proximity effect of the conductor of the power supply coils and discuss the effect of the kind of wire of the coils and the shape of the coils.