Evaluation of the Power Loss in Rails of a Non-contact Power Supply System for Railway Vehicles

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We have evaluated of the power loss in rails caused by the magnetic flux leakage of a non-contact power supply system for railway vehicles that is composed of figure-of-eight coils. We show that this system which has figure-of -eight coils whose leakage flux is small has an advantage that it is more efficient than the system composed of typical rectangular coils.