

## **Wireless Power Transfer System for Railway Vehicles with Improved Power Density of Onboard Coil**

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To enhance the flexibility of installation of wireless power transfer (WPT) system on railway vehicles, we modified WPT to increase the power per unit opposing area of ground and onboard coil up to  $150\text{kW/m}^2$  by setting mechanical gap between coils at 150-mm. In this paper, we describe the design of improved WPT system capable of collecting 150kW with a single onboard coil and the results of bench test using a reduced model to verify the system.