

Demonstration test of power supply control for electrified roads at the Osaka-Kansai Expo

Yoshinori TSURUDA ¹⁾

1) DAIHEN Corporation
1-11, Tagawa, Yodogawa-ku, Osaka City, Osaka, Japan

KEY WORDS: Wireless Power Transfer, Dynamic Wireless Transfer, Electric Road (A 3)

At Daihen, we are working to improve the charging infrastructure essential for the shift to electric vehicles (EVs), which are indispensable for realizing a decarbonized society. EV chargers include plug-in charging (normal and fast charging) and wireless power transfer (WPT). We have consistently developed and introduced cutting-edge EV charging systems that lead the industry, including high-output normal and fast chargers equipped with "automatic demand target setting function," "automatic charging power adjustment function," and "charging status monitoring function," as well as automatic charging systems that allow for the combined use of these. Regarding wireless power transfer, we have developed a stationary wireless power transfer system that enables charging at 15kW, one of the highest output levels in the domestic industry. Furthermore, at the Osaka-Kansai Expo held from April 2025, we conducted a demonstration experiment to showcase the convenience of our "on-road wireless power transfer system," developed by further applying our wireless charging system technology, by equipping EV buses circulating within the venue for visitors with this system. This presentation will introduce our company, explain the mechanism of wireless power transfer, describe the demonstration experiment at the Expo, and discuss our future initiatives.

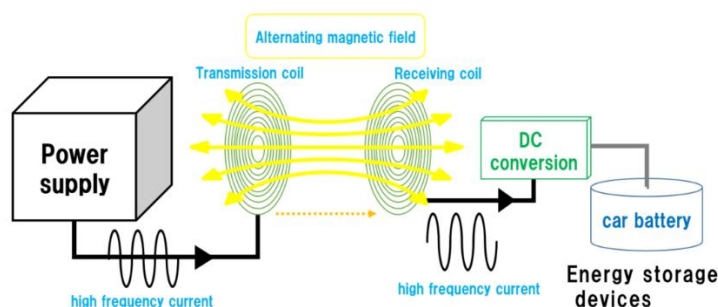


Fig.1 Configuration of a wireless power transfer system

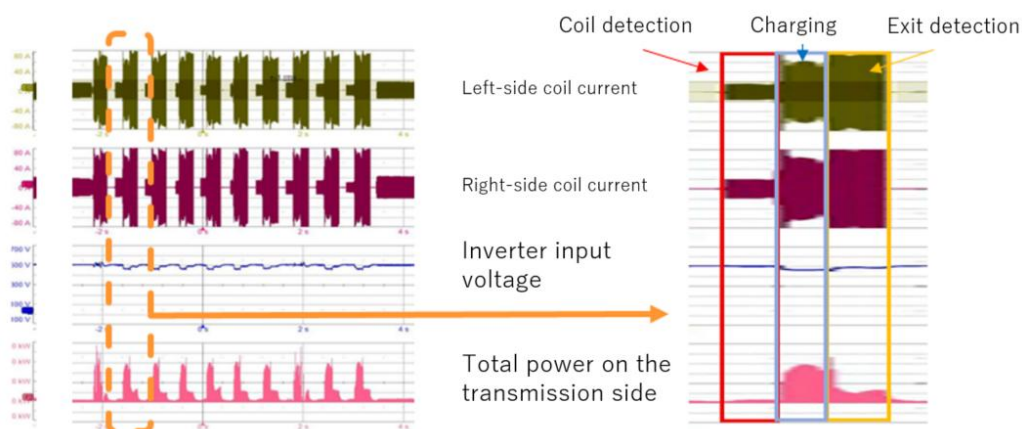


Fig.2 Additional measurements at Daihen Rokko Plant