

**Evaluation of Life Cycle CO₂ Emissions by Various Types of the Meter Gauged
Railway Vehicle**

Naoki AIHARA Fumiko MORIMOTO Taro TSUJIMURA

The CO₂ emissions in the case of operating around three vehicle types of a conventional type internal combustion car, a new type internal combustion car, and a standard electric car for 60 years on a local line were calculated. Operation energy was calculated based on the simulation of vehicles and track conditions. Moreover, the CO₂ emissions discharged in the process of manufacture and maintenance of equipment required for operation of a train were calculated. As a result, a standard electric car had the minimum in the whole amount of discharge, although the CO₂ emission accompanying vehicle manufacture was the maximum among three vehicle types.