

Recent Research on Simulation Techniques for Railway Vehicles

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In the rolling stocks field of Railway Technical Research Institute, a lot of R&D is being propelled from various points of view such as safety, speed-up, improving riding comfort, energy saving, and environment. Today simulation techniques are being adopted in some ways in most of those R&D and it is not too much to say that simulation techniques are becoming an essential tool to complete those R&D. Besides, there are some researches aiming for developing simulation technique itself. We have chosen four themes, namely, "Evaluation System for Energy Consumption of EMUs," "Development of a New Traction Method to Suppress the Wheel Slip One After Another," "Dynamic Behavior Analysis of Railway Vehicles during Earthquake," and "Evaluation of Carbody Side Strength for Railway Vehicle Structures" out of those R&D which is tackled with by our research groups, and introduce brief outline of them in this paper.