Method of Energy Simulation of Fuel Cell Train

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Recently, an expectation for the practical use of a fuel cell railway vehicle has been growing, and a simulation technology of energy consumption of the vehicle is needed for a design study of the vehicle. At this time, we have developed a simulation model of the fuel cell railway vehicle by using "Hybrid-Speedy" that is the existing energy calculation simulator, and confirmed that the simulation model has certain accuracy, based on comparison with the actual running data. With the simulator developed by us, we evaluated consumed hydrogen energy by conditions of line alignments, environmental performance, and cruising performance of the vehicle.