

Three-dimensional Simulation of Catenary/Pantograph Dynamic Interaction

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Simulation of Catenary/Pantograph dynamic interaction is often used for understanding the dynamic behavior of the overhead contact lines and pantographs stably to supply electric power to a vehicle. However, since lumped-mass model of the pantograph has been used in the conventional simulation, the three-dimensional dynamic behavior of a pantograph is not able to be calculated. The authors developed a new simulation method using a three-dimensional model of overhead contact lines and a pantograph. This paper shows this simulation method, especially contact analysis between contact lines and a pantograph, with a simulation result when a pantograph passes a crossing section.