Pantograph/Catenary Simulation Considering Static Structure Change with Temperature Shift

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For developing a new overhead contact system (OCS) and a new pantograph, it is important to understand dynamic interaction between the OCS and the pantograph under various condition, for example, temperature changes. In this context, pantograph/catenary simulator has been developed, in which lamped-mass pantograph models can run along a three-dimensional catenary FEM model which can consider static configuration when temperature changes. This paper shows the analysis method of contact between pantograph and catenary, and a calculation example by this simulator.