

Hybrid Simulation Based on High-Speed Test Facility for Pantograph/OCL Systems

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It is useful to evaluate current collection performance based on results of a bench test where sliding between overhead contact lines (OCL) and pantograph is considered. This study proposes methodology of hybrid simulation for the current collection systems using the High-Speed Test Facility for Pantograph/OCL Systems (HiPaC) built at RTRI in 2020. In the hybrid simulation, the contact force between pantograph head and vertical actuator is estimated from strain measured at the pantograph head. It is validated that the dynamic interaction between OCL and pantograph due to span-passing of the pantograph is represented by the proposed hybrid simulation.