

Verification of Prediction Method for Thermal Environment in Tunnel by Model Experiment and Analytical Solution

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The purpose of this paper is to verify our current prediction method based on simulation of thermal environment in tunnel by model experiments and an analytical solution. Comparison of the results by model experiments with theoretical results obtained from the analytical solution shows that the simulation results are very close to the theoretical results. In addition to the above, remeasurement of the airflow velocities and airflow temperatures in the model tunnel was performed using sensors with higher spatial resolution under the same conditions as the model experiments reported previously. As a result, it is found that the differences between the results by the simulation and those by the experiment using with higher performance sensors are found to be smaller than those reported previously.