

## **Method for Predicting Thermal Comfort in Commuter Trains in Summer**

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The aim of this study is to develop a method for predicting thermal comfort in commuter trains in summer. At first, to clarify the characteristics of thermal environment in commuter trains, temperature and humidity were measured during commercial service from the morning to evening commute. Then, to understand the factors influential in the passenger's thermal comfort, a subjective experiment was conducted. By the proposed method, the percentage of passengers dissatisfied can be predicted, and it is composed of two calculation parts: one is a part for calculating sensory temperature based on a human thermoregulation model, and the other is a part for calculating the percentage of passengers dissatisfied based on a statistical model derived from experimental data. The predicted value agrees well with the experimental results.