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Prediction of CO2 Concentration in the Korea Train Express (KTX) Cabins

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Abstract : Recently, because of the high-speed trains forced ventilation, it is important to control the ventilation. The ventilation is for controlling various contaminants, temperature, and humidity. The high-speed train route is straight to a destination having a high speed. And there are many mountainous areas in Korea. So, tunnel rate is higher then other country. KTX HVAC block off the outdoor air, when entering tunnel. So the high tunnel rate is an effect of ventilation in the KTX cabin. It is important to reduction rate in CO2 concentration prediction. To meet the air quality of the public transport vehicles recommend standards, the KTX cabin of CO2 concentration should be managed. In this study, the concentration change was predicted by CO2 prediction simulation in route to be opened.

Keywords : CO2 prediction, KTX, ventilation, infrastructure and transportation engineering
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