

**A Simulation Method on Airflow and Temperature in Long Railway Tunnel with
Ventilation Fans**

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As a public use of deep underground in a metropolis, stations connected with high speed railway tunnels are considered. In this case the pressure fluctuation in tunnel shafts caused by high speed trains will often exceed the operation range of conventional ventilation fans. Hence we have developed a numerical simulation program to calculate the airflow by considering that the air flows through a bypass instead of the ventilation shaft while the pressure fluctuation exceeds the operation range of fans. Applying this program, we have estimated the airflow and temperature in a long railway tunnel equipped with ventilation fans.