## Evaluation for Running Safety of Railway Vehicles against Localized Strong Winds

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High-rise buildings can create localized strong winds, a phenomenon known as "building winds". However, safety assessment methods for trains running in the vicinity of such winds have not yet been established. Therefore, we proposed a method to evaluate the running safety of a vehicle overturned by localized strong winds. Specifically, wind tunnel experiments, computational fluid dynamics analyses, and vehicle dynamics simulations were conducted to investigate the effects of localized strong wind caused by buildings on the behavior of railway vehicles. The results showed that when the rise time of the aerodynamic force acting on the vehicle is less than approximately 2 seconds, the rate of wheel load reduction increases compared to static analysis conditions.