

Evaluation of the Aerodynamic Force on a Railway Vehicle in Half-bank Half-cut Line Sections

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Evaluation of running safety of railway vehicles in high cross winds is carried out using an aerodynamic coefficient obtained from wind-tunnel tests. There are many types of section topography along actual railway lines, but the aerodynamic coefficient is sought for seven standard types of structure. Many lines close to the coast or rivers are often flanked by a slope on one side and a bank on the other (half-bank half-cut sections), and sections like this are treated as embankments. However, in sections with high cutting on the downwind side, the aerodynamic side force acting on the train is different from that in sections of normal embankments. Therefore, wind-tunnel tests were conducted to obtain the aerodynamic coefficient in a half-bank half-cut section.