

Assessing Aerodynamic Force of Flat Plate Object Installed on Railway Track by Wind Tunnel Test

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A flat plate for ballast stabilization has been newly developed for laborsaving in a process of removing and laying ballast in place of chemical agents distributed over track ballast. The risk of the plate going up into the air by natural strong wind should be assessed for safety. First, the small- and the large-scale wind tunnel tests are done to measure the aerodynamic forces acting on the plate. Second, this study assesses the risk of the plate flying away when they are exposed to the wind at estimated maximum speed using the tunnel test results. As a result, the risk is low, and the plates have sufficient anti-wind performance against natural strong wind.