

Micro-pressure Wave Emitted from a Tunnel Hood with Side Openings

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An impulsive pressure wave emitting from a tunnel portal, called a micro-pressure wave, is one of important wayside environmental problems in high-speed railways. A hood with side openings on its side wall installed at the tunnel portal of the train *entry* side is the principal ground-side countermeasure for reducing the micro-pressure wave. However, the micro-pressure wave tends to have a large peak value near side openings of the hood when the micro-pressure wave is emitted from the tunnel *exit* portal with the hood. In this study, a model experiment focused on the effects of the hood at the tunnel *exit* portal with side openings was carried out. In addition, a simple theoretical model was developed and the analytical results obtained by this model were found out to agree well with those of the model experiment.