

Method of Evaluating Snow Resistance Working Against Snowplow by Model Experiment

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In order to investigate the snow resistance working against snowplow, a model experiment has been carried out. A method of evaluating the snow resistance working against full-scale snowplow attached to an actual vehicle by the model experiment based on the similarity rule has been devised. By this method, the resistance against snowplow can be estimated with higher accuracy compared with the conventional calculation method using an area ratio. In this paper, the outline of the model experiment and the devised method is introduced. The experimental results of the resistance against model snowplows of scales 1/10 and 1/6.7 were converted to that of the model of scale 1/5 using this method, and they were plotted on the power approximated curve of the experimental results of the model of scale 1/5. Thereby, the scale effect and the validity of this method have been shown.