

**Improvement of Measurement Methods for Aeroacoustic Noise
from Bogie Section in the Wind Tunnel Test**

Nobuhiro YAMAZAKI Atsushi IDO Takeshi KURITA

We proposed a method to evaluate the aerodynamic noise from the bogie section of high speed trains in the wind tunnel test. In the first place, the flow velocity profile under the train car was measured in a field test by Laser Doppler Velocimetry (LDV) which is capable of measuring the velocity in the region outside of the rolling stock gauge. In the second place, the velocity profile at the inlet of the bogie section was simulated precisely in a wind tunnel test by installing a streamlined device between the car floor of the train model and the ground. The aerodynamic noise from the bogie section was measured by 2 D microphone array to improve the signal to noise ratio, and was then converted to 1/3 octave band based noise level. As a result, it was confirmed that the accuracy of the bogie model influences the noise spectra.