

**An Investigation on Vibratory and Acoustical Characteristics of
Concrete Bridge for Shinkansen**

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The railway bridge noise is generated by its vibration due to the wheel-rail interaction. In the vicinity of the bridge, the bridge noise often has greater contribution to the total wayside noise than other sources. Therefore, reduction of the bridge noise is an important issue for the wayside noise problem. We have investigated vibratory and acoustical characteristics of the concrete rigid-frame bridge for Shinkansen by field tests and numerical analysis to promote a better understanding of the bridge noise. In addition, we also conducted analysis for the girder concrete bridge, and confirmed the availability of the numerical analysis.