

**Analytical Study on Structure Member Vibration Characteristics of Reinforced
Concrete Rigid Frame Viaduct**

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In order to analyse effectively the response of the members of the railway reinforced concrete rigid frame viaduct to the vibration, we have developed a new analysis method. It divides the whole railway system into vehicles / track model, and the track / structure model. Using these models, we examined the influence of various parameters of the vehicle, track and structure on the structure member vibration. As a result, the following have become clear. For example, for 20Hz or more, unsprung mass has a great influence on response of the structure members. For 20-100Hz and 150Hz or more, the rail surface roughness, for 80Hz or more, the stiffness of the rail pad, for 100-150Hz, the interval of rail fastening systems and so on, have great influence on the structure member vibration respectively.