

Study on Method for Setting Seismic Force on Railway Viaduct Considering Influence of Shed

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In elevated stations, it is general that shed and viaduct are integrated structures. However, it is considered that in many cases, the shed and the viaduct are designed separately because of different execution periods of design and construction. Therefore, it is necessary to take into account the influence of the interaction between the shed and the viaduct in the calculation of the seismic forces used in the design of the shed and the viaduct, respectively. Specifically, it is necessary to consider the resonance (response amplification) with the viaduct for the seismic force to the shed. On the other hand, the seismic force on the viaduct is considered to be added by the shed as it interacts with the shed, but the actual situation has not been clarified. Therefore, in this paper, the seismic force on the viaduct integrated with the shed is analyzed and a practical setting method is proposed.