

Seismic Diagnosis Method of Bridge Abutment Focusing on Dynamic Interaction

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The interaction between the bridge abutment and the back fill is usually modelled as the earth pressure in seismic design of Japanese railway structures and the dynamic behavior such as the phase difference is not considered. In this study, the dynamic interaction is focused, and the numerical analysis models are proposed which can represent the physical phenomenon. The models are verified by the reproduction analysis of model shaking table tests, and the results of the trial calculations for actual structures show that the design results can be rationalized by using the proposed models.