

**An Evaluation of Vibration Properties of Scoured Bridge Piers by Using the Analytical  
Model of Vibration Characteristics Considering the River-flow**

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As one of evaluation methods of bridge pier integrity, we suggested before a method to determine the natural frequency of practical bridge piers through microtremor measurement. However, it has been found out through long-term measurement that accuracy of determination of natural frequencies of bridge piers depends on their structural conditions. Therefore, we focused a displacement of bridge pier as another indicator of stability and studied on the relationship between displacement and instability. The research in this paper focused on studies on vibration properties of scoured bridge piers by using the analytical model of vibration characteristics with consideration on the river-flow.