

**The Difference in Damping Characteristics According to Vibrating Directions
in Railway Piers and Its Evaluation Method**

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Many cases of dynamic response analysis during earthquake have been reported, but there is no adequate evaluation method of damping properties. The result of past observation and analysis by the authors implies that there is a positive correlation between the damping constant and the amplitude ratio of the upper side to lower side of the structure. In this study, we carried out microtremor measurement on mono-column pier without girders and evaluated correlation between the damping constant and the amplitude ratio of the upper side to lower side on the primary vibrating mode. Furthermore, we examine whether damping constants on earthquake response can be evaluated based on amplitude ratio of the upper side to lower side on the primary vibrating mode, referring this correlation.