

Natural Frequency Identification Method for a Substructure in Railway Bridges and Viaducts

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We have proposed a method to identify the natural frequency of a single structure from data obtained by measuring the vibration of railway bridges and viaducts. In the method, the natural frequency of a single structure can be theoretically calculated by using undamped natural frequencies and natural modes of a whole structure. The eigenvalue analysis was performed, and it was shown that the natural frequency of a single structure can be identified by the proposed method.