

**The Correction Coefficient of Nonlinear Response Spectrum Corresponding to
the Difference of the Initial Damping factor**

Kohei TANAKA Yoshitaka MURONO

The nonlinear response spectrum method has been used for seismic design of railway structure. Nonlinear spectra in design standards are evaluated based on dynamic characteristics of common railway structures. Therefore, when the design structure has a greatly different initial damping factor from common structures, these spectra should be corrected. In this report, a method for evaluating the correction coefficient of nonlinear response spectrum corresponding to the difference of the initial damping factor is proposed. It is evaluated from the correction coefficient of the linear response spectrum calculated from the damping factor and the period estimated by the equivalent linearization method. Finally, the validity of the proposed method was verified through its application to the design ground motions in railway design standards.