

Review and Evaluation of Viscose Damper on Structural Responses

Authors : Ehsan Sadie

Abstract : Developments in the field of damping technology and advances in the area of dampers in equipping many structures have been the result of efforts and testing by researchers in this field. In this paper, a sample of a two-story building is simulated with the help of SAP2000 software, and the effect of a viscous damper on the performance of the structure is explained. The effect of dampers on the response of the structure is investigated. This response involves the horizontal displacement of floors. In this case, the structure is modeled once without a damper and again with a damper. In this regard, the results are presented in the form of tables and graphs. Since the seismic behavior of the structure is studied, the responses show the appropriate effect of viscous dampers in reducing the displacement of floors, and also the energy dissipation in the structure with dampers compared to structures without dampers is significant. Therefore, it is economical to use viscous dampers in areas that have a higher relative earthquake risk.

Keywords : bending frame, displacement criterion, dynamic response spectra, earthquake, non-linear history spectrum, SAP2000 software, structural response, viscous damper

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