

عنوان مقاله:

Studying of some limitations of the discrete versus continuous models in analysis of impulsive loads

محل انتشار:

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خلاصه مقاله:

The common question in dynamic analysis of a structure is what type of analysis is better to be used, modal or wave propagation analysis? We can use both methods for elastic structures. As we know using modal analysis is a lot easier and more widespread among structures. But the important question is about the number of modes that we should consider in the modal analysis to reach an answer with a logical error. Many researches have been made to try to identify the minimum number of modes needed to obtain the same displacement with both methods. Due to importance of inter-story drift and its effect in localized yielding, in this research we study the minimum number of modes that are necessary in modal analysis to reach the similar displacement and strain deformation that will be obtained by using wave propagation analysis. The model is a shear beam with constant properties which is subjected to a pulse as excitation in the base that is simulated near field earthquake

کلمات کلیدی:

Discrete model, Continuous model, Wave propagation, Modal analysis, Shear beam, Impulsive load

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