A review of the Current Vietnamese Earthquake Design Code

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ABSTRACT

This paper provides a brief overview of the seismic activities in Vietnam. In the past, Vietnam did not have its own earthquake code. A new earthquake code which was based on Eurocode has been issued in 2006. The new earthquake code for Vietnam is reviewed in this paper. Due to the lack of historical records the establishment of the local site factors and design seismic response spectrum for major cities in Vietnam was found problematic. A case study was carried out to determine the full range response spectra for seismic design of building structures in Hanoi, the capital city of Vietnam. The study comprises the following components: (i) development of a seismic activity model for the potential earthquake sources in the region surrounding Hanoi; (ii) the response spectrum modelling for rock sites based on the assumed seismic activity; (iii) soil amplification modelling to represent typical soil conditions in Hanoi. Several representative boreholes have been obtained for soil resonance analyses based on the predicted bedrock motion. This method has been found very useful to produce important seismic parameters for earthquake design.