Aceleraciones de piso para diseño de elementos no estructurales y estructurales que no hacen parte del sistema de resistencia sísmica en edificios [

2018

text (article)

Analítica

The purpose is to evaluate the method used in the Colombian Earthquake Resistant Construction Regulations (NSR-10) to calculate the floor accelerations that are necessary to design non-structural elements and structural elements that are not part of the seismic resistance system. The study compares the maximum floor accelerations calculated with NSR-10, ASCE 7-10, UBC-97, Eurocode 8-04 and NZS 1170.5-04, with the maximum floor accelerations measured in specimens tested on a vibrating table, and in existing buildings during real earthquakes. The article also proposes a modification to the method currently used by NSR-10. The proposed modification generates a more accurate estimate of the accelerations needed to design these elements in medium and high-rise buildings. The proposed recommendations are based on the results of the evaluation of the method currently used in NSR-10, the procedure used in other seismic-resistant standards, experimental results measured in reinforced concrete structure models and accelerations recorded in instrumented buildings
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