

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 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 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

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