World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Ductility Spectrum Method for the Design and Verification of Structures

Authors : B. Chikh, L. Moussa, H. Bechtoula, Y. Mehani, A. Zerzour

Abstract : This study presents a new method, applicable to evaluation and design of structures has been developed and illustrated by comparison with the capacity spectrum method (CSM, ATC-40). This method uses inelastic spectra and gives peak responses consistent with those obtained when using the nonlinear time history analysis. Hereafter, the seismic demands assessment method is called in this paper DSM, Ductility Spectrum Method. It is used to estimate the seismic deformation of Single-Degree-Of-Freedom (SDOF) systems based on DDRS, Ductility Demand Response Spectrum, developed by the author.

Keywords : seismic demand, capacity, inelastic spectra, design and structure
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020