عنوان مقاله:
Reliability of FRP Reinforced Concrete Columns

محل انتشار:
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نویسنده:
Faeze Jafari - Structural Engineering Student, Department of Civil Engineering, Malayer University

خلاصه مقاله:
Fiber Reinforced Polymer (FRP) is being developed as the material of the recent century for its corrosion resistance and excellent thermo-mechanical properties, and high strength-to-weight ratio. This paper introduces a FRP based column design in dead load and also by considering the effect of the wind, earthquake and live loads. The premier design is based on FRP, Aba design guidelines. Additionally, the Monte Carlo simulation is used in order to model the variation of the column’s characteristics such as steel and ..., The Log-normal, normal and Weibull distribution functions’ parameters, employed in this approach, are widely related to the composites’ properties and loads’ type. To show the efficiency and wideness of our approach and its attachment to Aba design guidelines with constant coefficients, the safety factor, load and resistant coefficients have been measured. Despite premier designs with Aba design guidelines, load and resistant coefficients could be achieved in any safety factor by our approach, which can be used widely in order to design safety and economic fiber columns

کلمات کلیدی:
Fiber Reinforced Polymer, Monte Carlo, coefficients

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