عنوان مقاله:

Finite Element Analysis of Steel Shear Wall Reinforced With CFRP Composite

محل انتشار:

اولین کنفرانس بین المللی مکانیک، ساخت، صنایع و مهندسی عمران (سال: 1398)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

The Steel shear wall system used to build and rebuild very important buildings in advanced and earthquake countries such as the UnitedStates and Japan, is a very new system that has been quickly spotted in the world in the last three decades. The basis of the idea of a steel shearwall is the use of a diagonal stretch field, which is formed after the buckling of a steel plate. In fact, the steel shear wall is a new systemresistant to lateral loads, which is better than other side-impact resistant systems. In this system, the lateral forces are shifted horizontally to the plate, beams, and columns of this type of wall with the floor apertures. In this research, the role and effect of the opening on the reinforcedshear reinforced wall of composite layers due to the application of seismic loads with a specific time period on the structure has beeninvestigated. In order to analyze and investigate the effect of openings on the steel reinforced steel reinforced steel wall in a steel structure, allseismic dynamic loads imposed on the structure and the actual boundary conditions of the definition, different shapes of popups withdifferent layouts (5% circular and square in the middle) The shear wall is modeled and reinforced by composite layers. Then a regular grid ofelements will be created to crawl and analyze the structure based on finite element method. After simulation of the output contours .such asstresses, strains and displacements in the steel shear wall structure, it will be evaluated and analyzed

کلمات کلیدی:

Steel Shear Wall, CFRP Composite Layers, Finite Element, Seismic Load, ABAQUS Software