

## عنوان مقاله:

FINITE ELEMENT MODELING AND INVESTIGATION OF THE EFFECTS OF MASONRY INFILLS ON THE BEHAVIOR OF REINFORCED CONCRETE (RC) FRAMES

## محل انتشار:

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## خلاصه مقاله:

In this study, a finite element model for masonry-infill of RC frames has been introduced. The micro model incorporates the bricks, bed and head joints, surrounding RC frame and the interface between frame and masonry infill. The results of the analysis have been validated by experimental data reported in the literature. A parametric study has been conducted and the effects of strength, stiffness, aspect ratio of infill panels and the effect of relative stiffness of frame to masonry panel on lateral response of the structure have been investigated. It was found that infill panels increase stiffness and ultimate strength of the frames significantly, and by increasing stiffness and strength of infill, stronger failure mechanisms are activated, and failure of masonry panels shift to failure of concrete frame. It was also observed that aspect ratio plays an important role in determining failure mechanisms not only in the infill but also in the frame.

## کلمات کلیدی:

masonry infill, RC frame, finite element modeling, lateral response, failure mechanism

## لینک ثابت مقاله در پایگاه سیویلیکا:

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