

عنوان مقاله:

Evaluation of controlled seismic behavior of masonry infilled steel frames

محل انتشار:

ششمین کنفرانس بین المللی پژوهش در علوم و مهندسی و سومین کنگره بین المللی عمران، معماری و شهرسازی آسیا (سال: 1400)

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خلاصه مقاله:

The masonry products made of clay, lightweight concrete or similar types of aggregate are among the materials most commonly used in building construction due to their availability, acceptable cost, generally good physical properties, and easy production and installation. These products can be used as load-bearing elements or as an infill in main structural elements, such as steel or concrete frames. The effect of masonry walls on the behavior of steel frames is one of the important issues of seismic response of structures. Although the fact that the presence of infill affects behavior of the main structural system is well known, there are still no specific methods or detailed design rules for the analysis of these interactive, combined structures called masonry in filled frames. One of the important problems is that the effects of infill can be either beneficial or detrimental which depends on many various parameters related to structural configuration, geometric properties of masonry panels, material properties. Generally, three different situations are possible and recognized by current codes such as infill panel is positively connected to steel frame elements, infill panel is structurally disconnected from steel frame elements, and infill panel is in contact with steel frame elements but is not positively connected to them. This third case is actually the most common situation in which masonry infill is used, and so structural configuration is considered in this article.

کلمات کلیدی:

Masonry products, Concrete, Structural configuration

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