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Numerical Modelling of Infill Panel_ Review and Application

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Abstract

Infill panels have shown far-fetched effects on the global response of infilled framed structures during seismic actions. Regardless of this, the infill panels are, in general, considered non-structural elements due to complex analysis. However, in the past few decades, researchers have developed several numerical models that attempt to depict the actual behaviour of the infilled frames. In this article, a state-of-the-art review of the numerical models for infill panels is presented with emphasis on the macro model where the infill panel is modelled as an equivalent strut. In addition, the nonlinear analysis of infilled framed structure is carried out to discuss the application of one of the simplest yet efficient multi-strut models.

Keywords: Infill panel, Nonlinear analysis, Multi-strut model