

## Behavior of the Masonry Infill in Structures Subjected to the Horizontal Loads

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**Abstract :** Masonry infill walls are inevitable in the self-supporting structures, but their contribution in the resistance of earthquake loads is generally neglected in the structural analyses. The principal aim of this work through a numerical study of the behavior of masonry infill walls in structures subjected to horizontal load is to propose by finite elements numerical modeling, a more reliable approach, faster and close to reality. In this study, 3D finite element analysis was developed to study the behavior of masonry infill walls in structures subjected to horizontal load: The finite element software being used was ABAQUS, it is observed that more rigidity of the masonry filling is significant, more the structure is rigid, so we can conclude that the filling brings an additional rigidity to the structure not to be neglected. It is also observed that when the framework is subjected to horizontal loads, the framework separates from the filling on the level of the tended diagonal.

**Keywords :** finite element, masonry infill walls, rigidity of the masonry, tended diagonal

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