



## **The Behaviour of Infilled Frames under Horizontal Loading**

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**Abstract:** In this study, seven steel frame systems produced with different geometries as one bay one story steel frame systems and hollow brick walls were tested. Hollow bricks with 19x18.5x8.5 cm dimensions were used as infill material because of their lighter weights. The steel frames tested in the study had different span / height (L/H = 1.00, 1.20, 1.40) ratios, each of which was tested under three different conditions; in the first, the span was empty; in the second, the span was filled with hollow brick wall; and in the third, the span was filled with hollow brick wall with plaster. The lateral displacements, crack patterns, failure modes and ductility were investigated on the specimens by applying lateral forces.

**Key words:** *Infilled Steel Frames, Lateral Loads, Lateral Stiffness, Hollow Brick Wall*

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