Resistance of join beams wings shear walls concrete in the Highbuildings*

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Abstract

The horizontal Join beams with the slabs of reinforced concrete play the, the role of horizontal shear walls on the building height, Thus, the horizontal beams, columns and shear walls work together to form, the vertical resistance and horizontal loads resulting from wind pressure or the intensity of earthquakes

As a result to the great importance of the work of the join beams between wings of shear wall in the carrier wholesale of armed concrete; we have conducted experiments on shear wall and the result experiments compare with theory scientists and researchers in high-buildings. Been compared join beams with moment of stiffness constant in the level of its confluence with wings shear walls (Hold the forces of resistance horizontal dynamic plasticity in stage). And join beams in the form of crowns with moment of stiffness variable in the level of its confluence with wings shear walls. We suggest a new theory with relationship for the change in the moment of stiffness join beams with crowns between wings of shear wall from reinforced concrete. Extract the experimental results and compare them with the proposals of the new theory, and computational methods for global theories on the subject of search

And the impact of the work of the join beams with crowns between wings shear walls on the horizontal loads external pressure intensity of earthquakes or wind.

Keywords: Beams; shear walls; the shear walls of the hole cut; join beams; join beams with crown; reinforced concrete; high buildings; the horizontal loads (earthquakes, winds).

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^{*} For the paper in Arabic see pages (29--40)

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