

## عنوان مقاله:

NONLINEAR ANALYSIS OF DIFFERENT SHAPE OF FLANGE SHEAR WALLS

## محل انتشار:

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## خلاصه مقاله:

The reinforced concrete shear walls are effective elements against lateral loads. This lateral resisting system absorbs shear and also controls the displacement of structure. But past analyses show that structure behavior would improve if shear wall have been flanged. Five models in the form of T, U, H, Z and I shapes wall used in this study for investigation of nonlinear behavior of flanged shear walls. Walls had been modeled and meshed by using nonlinear finite element software. Analytical results show that shear absorption of T shape shear wall is more than other shapes. In this study, the lateral load in T shape shear wall is 10 percent more than that of Z shape. Also study of shear walls ductility show that I shape shear wall has been able to undergo horizontal displacement after yielding more than other models. This is equal to 7 percent more than U shape shear wall. The analytical results of shear wall also show when flange is in pressure, shear absorption is 5 percent more than flange under tension. Finally, the ultimate resistant of shear walls with web of connect in center of flange (T shape) could be increased up to 10 percent (versus shear walls with web of connect in corner of flange (U shape).

## کلمات کلیدی:

Shear wall, Flange shape, Nonlinear behavior, Finite element, Ductility

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