عنوان مقاله:

Theoretical and Numerical Study On Shear Buckling Of Flat and Corrugated Low-Gauge Steel Walls

محل انتشار:

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خلاصه مقاله:

Experimental and numerical studies conducted in the past three decades have demonstrated that a steel plate shear wall is an effective and economical lateral load resisting system against both wind and earthquake forces. Use of steel plate shear wall systems has been shown to be more cost effective than the other lateral load resisting systems. Steel plate shear walls are much lighter than the commonly used reinforced concrete shear walls, which reduce both the gravity loads and seismic forces. This is a very brief summary of the paper's contents. In present research we consider two types of plates one using a corrugated plate and one using a flat steel plate has been studied as two types of compression and shear edge loading with clamped and simply supported boundary conditions and the low gauge steel plate behavior in flat and corrugated shapes has been compared. Totally 8 case has been compared in present research using ABAQUS finite element software and results have been verified with theoretical formulas. And finally, provided optimized case for using as resisting system under shear and compression

کلمات کلیدی:

Corrugated Walls, Low gauge, Shear Buckling