

DESIGN AND PERFORMANCE PARAMETERS OF SHEAR WALLS: A REVIEW

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Abstract

Reinforced concrete (RC) walls are used in buildings to provide lateral stiffness and strength against lateral forces like earthquake, wind etc. Shear walls are one of the most important lateral load-resisting systems in high-rise buildings. This paper provides an overview of not only reinforced concrete (RC), but also composite shear walls. The paper focuses on four inter-related review areas, namely i) conventional shear walls with rectangular cross section, ii) coupled shear walls, iii) composite shear walls, and iv) shear walls with opening(s). Behavior of shear walls which are the most damaged structural elements during earthquake and the parameters affecting this behavior are evaluated in this paper. However, this paper presents the available information about the design and performance parameters of shear walls.

Keywords: Design; Composite shear wall; Coupled shear wall; Performance; Shear wall.