

Analytical Study of the Composite Steel Structure under the Influence of Seismic Circumstances- A Review

Harish R D¹ and S A Vengadesh Subramanian²

M.Tech Student, Department of Civil Engineering ¹

Assistant Professor, Department of Civil Engineering²

SRM Institute of Science and Technology, Chengalpattu, India

Abstract: Reinforced concrete structures are the most often utilized structures in India, owing to their ease of construction and affordability, particularly for low-rise residential buildings. Due to variations in factors such as stiffness, an increase in dead loads, span limitation in both directions, and costly formwork, R.C.C structures are no longer convenient or cost-effective for medium and high-rise buildings. High-rise building design has grown more difficult for designers because of the difficulty in achieving an efficient and cost-effective design. Furthermore, wind and seismic characteristics must be considered while designing high-rise structures. Despite the challenges in making steel, steel's improved performance in high-rise structures helps to overcome the aforementioned issues. Because of its complexity in analysis and design, many structural engineers are reluctant to use steel. From previous studies, the use of steel structural systems makes the buildings more durable, more cost-effective, and better able to withstand earthquakes. This paper discusses the review association of execution of the unsymmetrical (Trapezoidal) model, R.C.C., and steelworks under the influence of wind and seismic circumstances.

Keywords: Wind effect, R.C.C, steelwork, High-rise building, Earthquake effect, trapezoidal section

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