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TITLE OF PROJECT:

Seismic Analysis of Reinforced Concrete Buildings with Fluid Viscous Dampers at Different Locations.

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ABSTRACT (150-300 words):

This study delves into the critical domain of seismic analysis for reinforced concrete buildings, with a specific focus on augmenting seismic performance through the strategic integration of fluid viscous dampers. Given the substantial threat earthquakes pose to structures, mitigating their impact is paramount for ensuring both structural integrity and occupant safety. Employing advanced computational models and simulations, our research comprehensively examines the dynamic behavior of buildings subjected to seismic forces, incorporating dampers strategically placed at various locations.

The investigation rigorously assesses the efficacy of these dampers in mitigating structural vibrations, displacements, and accelerations during seismic events. A pivotal aspect of our study involves scrutinizing the influence of diverse damper positions on overall seismic performance. By considering parameters such as damping ratios, natural frequencies, and mode shapes, we gain insights into the dynamic response of structures.

Additionally, the research extends its inquiry to the economic feasibility and practical implementation of fluid viscous dampers in reinforced concrete buildings. The findings offer valuable guidance to structural engineers and designers, aiding in the optimal placement of dampers to fortify buildings against seismic forces. In essence, this study contributes to the ongoing pursuit of robust and cost-effective strategies for earthquake-resistant construction, thereby fostering the safety and stability of structures in seismic-prone regions.

KEYWORDS: Fluid Viscous Dampers, Seismic Analysis, RCC building.

CATEGORY: Structural Engineering.