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SEISMIC ISOLATION OF RESIDENTIAL BUILDING

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ABSTRACT: Seismic Isolation of buildings has been practiced for centuries adopting different type of materials, such as sand, saw dust, wood, rubber and similar materials due to the significant advantages gained in the event of an earthquake. Nevertheless, seismic isolation is being identified as a modern or innovative technology; the fundamental concept of isolation is far from being a recent development. A significant number of buildings have been implemented with seismic isolation systems in one form or other. In the present study, a four story regular building located in Zone III and consisting of medium soil has been analyzed with and without seismic isolation system. The isolation has been implemented using Lead Rubber Bearing. The investigation shows that, when Lead Rubber Bearing is adopted, there is a substantial reduction in base shear and thereby the time period is elongated significantly. Therefore, seismic isolation system as adopted in the present study provides definite advantages in the event of an earthquake.

Keywords: *Seismic Isolation, Time Period, Fundamental Frequency, Lead Rubber Bearing*