

## عنوان مقاله:

(Resonance assessment of a base-isolated building using Lead Core Rubber Bearing (LCRB)

## محل انتشار:

اولین کنفرانس بین المللی مهندسی عمران، معماری و بازآفرینی شهری (سال: 1398)

تعداد صفحات اصل مقاله: 23

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## خلاصه مقاله:

Seismic isolation has been known as an alternative method to design for earthquake resistant which has the potential of protecting the structural and non-structural components of the base isolated buildings and also protect the contents of the building. But its success is still questioned under near field ground motions where the resonance may occur and causes large displacement even with those base isolated buildings. In this paper, Vulnerability of the Lead Core Rubber Bearing (LCRB) isolated building has been assessed under different excitations for different isolator's properties. As the base isolation systems are period dependent, the results clearly show that the isolated building and isolator system are highly sensitive and vulnerable against the near-fault pulse period ground motions. In this study, vulnerability of the base isolation system and superstructure has been studied by considering the behavior factor of the isolator. In this direction, five different base isolation systems subjected to five different synthetically generated earthquakes (with different pulse period), and finally, the behavior of the base isolation systems and base isolated buildings are illustrated and compared in figures.

## کلمات کلیدی:

Lead Core Rubber Bearing (LCRB), Resonance phenomenon, Runge-Kutta method, MATLAB, Pulse period ground motions

## لینک ثابت مقاله در پایگاه سیویلیکا:

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