

Passive Seismic Energy Dissipation Mechanisms for Smart Green Structural System (SGSS)

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Abstract : The design philosophy of building structure has been changing over time. The reason behind this is an increase in human interest regarding the improvements in building materials and technology that will affect how we live, the aim to speed up construction period, and the environmental effect which includes earthquakes and other natural disasters. One technique which takes into account the above case is using a prefabricable structural system, in which each and every structural element is designed and prefabricated and assembled on a site so that the construction speed is increased and the environmental impact is also enhanced. This system has immense advantages such as reduced construction cost, reusability, recyclability, faster construction period and less environmental effect. In this study, some of the developed and evaluated structural elements of building structures are presented.

Keywords : eccentrically braced frame, natural disaster, prefabricable structural system, removable link, SGSS

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