**IMPROVEMENT OF SEISMIC PERFORMANCE IN EDUCATIVE RC BUILDING USING INNOVATIVE EARTHQUAKE – RESISTANT SYSTEM**

**DOI 10.37153/2686-7974-2019-16-735-735**

SIMBORT E.[[1]](#footnote-1)

**ABSTRACT**

In last years, the use of devices that improve the seismic response of structures has increased considerably. Many structures that were designed with the latest seismic design codes and considering the conventional approach have not had an adequate behavior against earthquakes (Chile, 2010) and in some cases they lost their total capacity of resistance (Mexico, 2017). This fact endorses the implementation of antiseismic devices into the structures for improving their seismic capacity.

In the first part of the present research, the seismic behavior of an educational building designed according to the conventional approach is evaluated through the Peruvian Code, E.030. Its behavior is subsequently evaluated incorporating two systems of seismic dissipation, as well as two types of seismic isolators. The results show an improvement of the behavior of the structure against the traditional approach. In some cases, this improvement is considerable, achieving a level of performance of immediate occupation under a MCE.

Finally, this research will serve as a starting point for the implementation of these innovative techniques into the design regulations in a mandatory way and in general in essential buildings according to the E.030 where it is necessary to have a high level of seismic performance.

1. Ph.D., Universidad Católica San Pablo [↑](#footnote-ref-1)