

## Dynamic seismic performance of curtain wall fasteners with displacement absorption

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### ABSTRACT

Recently, earthquakes occurred in Korea caused more damage in non-structural elements than structural elements. Domestic seismic performance standards for non-structural curtain walls are applied only to static seismic performance standards such as AAMA 501.4 and 501.7, but it is necessary to evaluate the dynamic behavior of curtain walls due to earthquakes. In this study, dynamic seismic performance experiments on large-scale curtain walls with seismic fastener under dynamic displacement application simulating the AAMA 501.6 seismic waveform were conducted, and analyzed the dynamic properties of curtain walls through comparison with conventional curtain wall modules through finite element analysis. The curtain wall reinforced with the seismic reinforcement technology applied with fastener absorbs the stress applied to the exterior material by controlling the dynamic displacement, and it was found that the stress received by the curtain wall was significantly reduced.

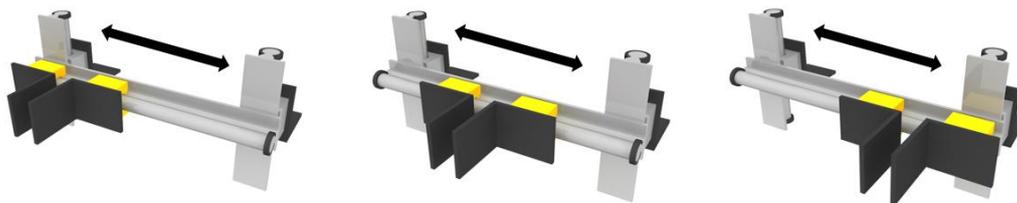


Fig. 1 Schematic of fastener capable of absorbing displacement by linear guide

### REFERENCES

AAMA 501.6. (2018), "Recommended Dynamic Test Method for Determining the Seismic Drift Causing Glass Fallout from a Wall System", *American Architectural Manufacturers Association*, USA.

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