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Spotlight on *Structures*

Editor's Featured Article

The Featured Article for Volume 78 of *Structures* is now available. Associate Editor, Chiara Bedon, has chosen a paper evaluating a space-saving seismic damper through performance tests, numerical simulation and finite element analysis.

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Experimental investigation and seismic evaluation of space-saving window-type viscoelastic damper

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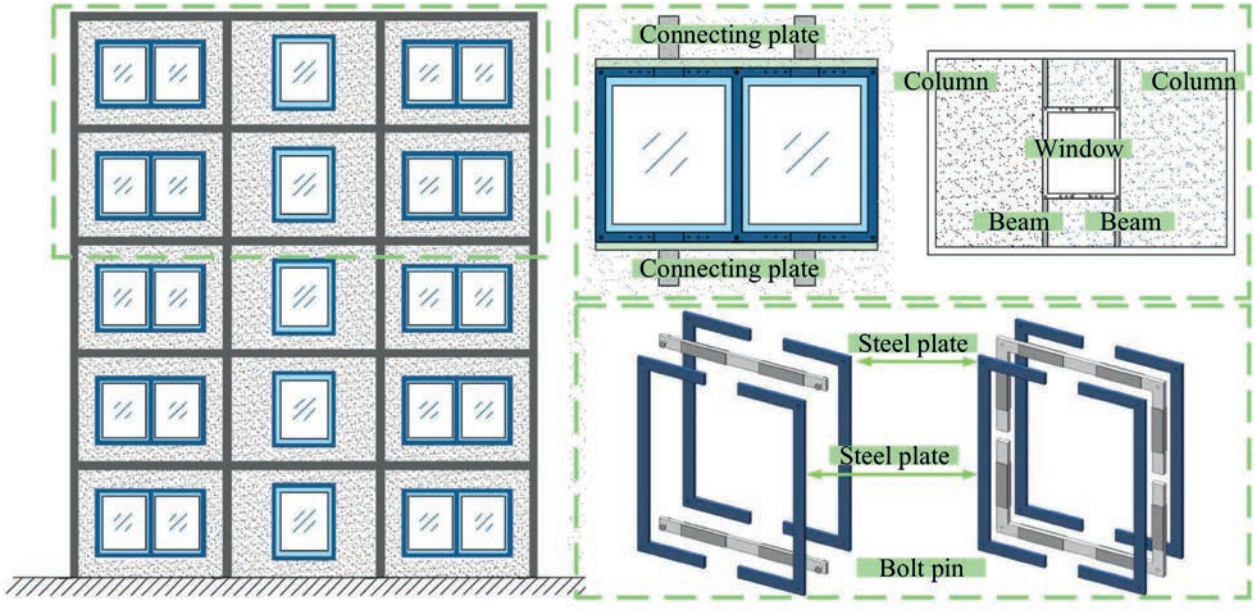
The conventional viscoelastic damper has been shown to effectively suppress excessive vibration. However, conventional viscoelastic dampers typically require large building space, which negatively impacts the arrangement of doors and windows. To reduce the building space occupied by viscoelastic damper and increase the applicability of the project, this paper proposes a space-saving window-type viscoelastic damper (WTVED). Firstly, a mechanical model of the WTVED was established, and a performance test was conducted. Subsequently, the experimental results were compared with the numerical simulation results to validate the mechanical model. Finally, to demonstrate the seismic performance of WTVED, a finite element analysis was conducted on a frame structure subjected to seismic excitation. Compared to the OS, the peak displacement, acceleration and shear force of the WTVED subjected to design basis earthquake are reduced by 42.98%, 22.37% and 23.64%, respectively. In rare earthquake, these three indicators of the WTVED are reduced by 39.98%, 20.83% and 24.06%, respectively.

→| Read the full paper at **https://doi.org/10.1016/j.istruc.2025.109318**



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