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Performance-Based Wind Design of Tall Moment-Frame Buildings Considering R_{WR} Factor

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ABSTRACT

Due to the acceptance of performance-based wind design (PBWD) in various design standards, including ASCE, several studies have been conducted on PBWD for high-rise buildings (Alinejad et al. 2021; Jeong et al. 2021). Nevertheless, specific criteria and guidelines for implementing PBWD are still under development. While PBWD case studies have been conducted on buildings with various geometric shapes and structural systems, contributing to guideline development, research on PBWD for high-rise RC moment frame buildings without a core wall is insufficient. This study aims to perform PBWD for various types of high-rise RC moment frame buildings and evaluate their structural performance through time-history analysis to provide PBWD design cases.

REFERENCES

Alinejad, H., Kang, T. H.-K., and Jeong, S. Y. (2021), “Performance-based wind design framework proposal for tall buildings”, *Wind Struct.,* **32**(4), 283-292.
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