

Current Design Approach for Seismic Resistant Automated Rack Supported Warehouses: Strong Points and Critical Aspects

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Abstract : Automated Rack Supported Warehouses (ARSWs) are structures currently designed as steel racks. Even if there are common characteristics, there are differences that don't allow to adopt the same design approach. Aiming to highlight the factors influencing the design and the behavior of ARSWs, a set of 5 structures designed by 5 European companies specialized in this field is used to perform both a critical analysis of the design approaches and the assessment of the seismic performance, which is used to point out the criticalities and the necessity of new design philosophy.

Keywords : steel racks, automated rack supported warehouse, thin walled cold-formed elements, seismic assessment

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