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Weaknesses and Performance Defects of Steel Structures According to the Executive Criteria

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Abstract : Despite the experience of heavy losses and damages of recent earthquakes such as 8 km E of Pāhala, Hawaii, 11 km W of Salvaleón de Higüey, Dominican Republic and 49 km SSE of Punta Cana, Dominican Republic earthquakes, the possibility of large earthquakes in most populated areas of any country and the serious need for quality control in the design and implementation of buildings, not enough attention has been paid to the proper construction. Steel structures constitute a significant part of construction in any metropolitan area. This article gives a brief overview of the implementation status of these buildings in urban areas and considers the weaknesses of performance that typically occur due to negligence or insufficient mastery of the building supervisor in the principles of operation of earthquake-resistant buildings, and provide appropriate and possible solutions to improve the construction.

Keywords : bracing member, concentrated load, diaphragm system, earthquake engineering, load-bearing system, shear force, seismic retrofitting, steel building, strip foundation, supervising engineer, vulnerability of building
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